# THE Purchasers Pattern, Much Enlarged.

## *The First Part.*

Shewing the true value of Land or Houses, by Lease, or otherwise.

Whereunto is added many Rules for the valuing of the ruined Foundations in the City of *LONDON*, and for the composing of Differences between Landlord and Tenant about rebuilding them: also Rules and Tables for the valuing of all Party-Walls.

*Also Tables of Interest and Rebate at* 6 per Cent.

## *The Second Part.*

Shews the measuring of *Land*, *Board*, *Timber*, &c. correcting the false wayes used by many therein.

Also the Art of Gauging much enlarged, shewing not only the measuring of Wine, Beer, and Ale Vessels, but also the Gauging of all manner of Brewers Tuns.

*With Tables of the Excise of* Beer *and* Ale.

Also many other Rules and Tables of Weights and Measures, Forreign and Domestick; Tables of Accounts, Expences, &c.

The fifth Edition; by *Henry Phillips*.

*LONDON*, Printed by *E. Cotes*, for *John Pierrepont*, 1667.

Soc. Reg. Lond.

# IMPRIMATUR

Ex Æd. Sab. 24. Mart. 1662. Geo. Stradling, S.T. *Rev. in Christ. Pat.* Gilb. *Episc.* Lond. *Sac. Domest.*

March 28. 1663. *Oct. Pulleyn, Wa*

# To the Reader.

Courteous Reader,

THis little Book was almost utterly destroyed and lost in our late sad and lamentable Desolation, by the furious Flames, the Book-seller saving not one of them. Alas, how could a little Paper scape, when so many strong Houses, and Stately Temples could not resist, but were reduced to dust and ashes: But yet, as I hope to see our Famous City to be built again, and that in a more convenient and beautiful Form and Fashion, by the careful Order and Directions of our most Gracious Soveraign, the Kings Majesty, and the High and Honourable Court of Parliament) and by the ready Conformity of our Citizens thereunto: So I have taken some pains, not only to revive and reprint this Book, but have added many Observations, Rules, and Tables, very necessary in this juncture of time,

about the true worth and value of the
ruined Foundations, and for the com
posing of all differences and questio
which may arise between Landlo
and Tenants, concerning their Inter
in these Foundations, and the cost a
charges of the building thereof, a
also for the reckoning up the cost
charges of all Party-Walls betw
House and House: all which I h
will give good satisfaction to m
men; and so be a means not only of i
proving the Book, but of forward
the building of our Desolate City.

I have also added many things c
cerning Gauging, shewing how to fi
the true content of all manner
Brewers Tuns, and calculated new
bles for that purpose; as also for
ready reckoning up of the Excis
Beer and Ale.

By all which I hope I have m
the Book, though not much bigger,
much better: So not doubting to fi
your kinde acceptance, as I have d
often formerly. I rest, Yours,

Henry Phill

## *Rules and Directions for the Purchasing the Ground Plots and Foundations of Houses lately burned in the City: and for the stating of the Interest and Claims between Landlord and Tenant in the said Foundations, in order to the Building thereof, and shewing the true value of all party Walls.*

*Courteous Reader,*

THis business being of so great concernment and falling in my way, I could not but take some notice thereof; yet I will not take upon me to be a judge, absolutely to binde men to my rules; but only shew you, how by my Tables of Purchases, you may be able to give a reasonable value of these things, and so know when and how to make a good bargain either in buying or selling.

Now there being many and divers cases, and some of them more hard and intricate than others, it will be the best way to begin with such as are the most plain and

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ſimple queſtions; and ſo they will lead
help to direct in thoſe which are more
ficult and perplexed.

The firſt queſtion therefore ſhall be
cerning the true value and worth of
foundations, what may be the beſt wa
judge and reckon the true value of them

There are ſeveral wayes which many
uſe to value theſe foundations, by com
ring whereof, you may the better ju
both of the way to value them by, and
of the true worth of the ſaid Foun
tions.

Firſt, Some value them by their len
or breadth toward the ſtreet, reckoning e
ry foot in front to be worth 4, 5, 6, 8,
10 ſhillings yearly, according to the ſt
or place they ſtand in; and this yearly
lue they reckon at 20 years purchaſe, and
every foot in front is worth 4, 5, 6, 8,
10 pounds. But this way is very uncerta
for there is not only much difference
price in ſeveral Streets, but likewiſe ther
much difference in the depth or length
Houſes, which may cauſe much variety
the price and value thereof: ſo that this w
can be no certain or general rule given,
many things being to be conſidered. Beſid
hereby men will be very ready to dece
themſelves, and value them at too low

ra

grace. For a foot is so small a measure, that men may count 10 *l.* a great price for a foot of ground: but I shall shew you that it may be worth 15 or 20 *l.* in many places.

Secondly, Others there are who value these foundations by their length and breadth, measured by the foot; reckoning every foot square to be worth three or four shillings. But this way will deceive you as much, or more, than the other, if you are not careful to set a good rate upon each foot of ground; for a foot is so small a measure, that men think it little worth: so that this ground being scant and precious, is ready to be too much undervalued, one foot of Ground here being worth 8 or 10 shillings, which in Land in the Country, is not worth half a farthing, though you reckon the Land at 20 shillings an Acre, and 20 pound the Purchase; for so it is worth but one penny a Yard, and every yard hath nine foot.

The way therefore which I shall prescribe, as more general and certain for the valuing of these foundations, shall be this

Get a true and indifferent estimate of the yearly rent of these houses, what they were formerly worth at a good handsome moderate rack Rent, without any abatement or diminution thereof by fines, or any

other considerations: the which be
known, you may reckon the true value
these foundations to be worth between fo
and five years purchase, according to
said yearly Rent; that is, about the th
part of the full worth or purchase of
fee simple of the house. And that this
a very fair and moderate value of the
Foundations, I shall demonstrate unto
by these considerations.

First, I take it for granted, that a go
fair house, standing well and convenient
may be worth 12 years purchase at
least.

Secondly, I finde by several inquiries a
observations, that an house of the thi
rate, fronting the high Streets, may
built at the most, for 8 years Rent of
former house: so that if the house w
worth 50 or 60 pounds a year, it may
built for 400 pound, or thereabout.

Thirdly, if you take this 8 years pu
chase for the Building, out of 12 years pu
chase for the fee simple, there will rema
4 years purchase for the worth of the fou
dation, which is full one third part of th
full value of the said house. Now this
suppose is as low a reckoning as can b
made of the value of houses, to value them
but at 12 years purchase, whereas they ar
rath

rather worth 14 or 15 years purchase; and so if 8 years purchase will build them, the foundation, or ground plot, may be worth 4 or 5 years purchase very well. And as for the charges of the Building that will not amount to more than 8 years purchase, as I shall shew you presently. And I doubt not when those houses are new built, they will yield as much rent as formerly, and be worth as much, or more, for sale: yea, some Ground and Houses may be much improved; and therefore upon these grounds and reasons, I state this first question concerning the value of these foundations, that it doth amount at least to the third part of the value of the former house, while standing, that is about 5 years purchase of the former rent.

There is nothing can be objected against this, if the charges of Building doth not exceed 8 years purchase; therefore for the clearing of this, Suppose an house, which is one rod, or 16 foot and an half in front, and two rods deep, the compass of this house will be 6 rods; and if this house stand in the high Streets, having a Cellar, and 4 Stories, the height thereof will be 50 foot, or 3 rods: so that there will be 18 rod of Brickwork in the Wall, which may all be reduced to a brick and an half thick,

and so each rod of Brick-work takes up 4500 Bricks, and will cost about 7 *l.* the building, which will come to in all 126 *l.* The timber-work for Floors, Windows, and Roofs may cost as much more; and the Tyling, Plaistering, Lead, and Glassing, as much more also: so that the whole amounts to 378 pounds: the allowance for the Party Walls will very well pay for the Chimneyes. So that this house cannot amount to above 400 pound the Building and such an house standing in any of the high Streets, cannot be worth less than 50 pound a year, which in 8 years comes to 400 pound: so that the building cannot cost above 8 years purchase. Yea, if you reckon this house at 60 pound a year, as it may very well yield in some places, then 7 years purchase, which amounts to 420 pound, will very well build it.

Now as I said before, if the house may be built for 7 or 8 years purchase, and may be sold for 14 or 15 years purchase, the ground may very well be worth 5 or 6 years purchase, if not more in some places.

For here I must tell you, though the way of valuing the ground be as equal a general a Rule as can be; yet there must some respect had to the place where the house stands. For if this house should stand

in some ordinary Lane, it would not yield above 30 pound a year, which is but half the rent aforesaid, and yet it would cost 300 pound the building, which is 10 years purchase; so that there remains but 5 years purchase for the value of the ground.

Therefore if you will more exactly judge and determine of the worth of these foundations, it will be best to range them into three sorts, reckoning the first and lowest sort of houses which yield least rent, at 4 years purchase; the second sort of houses which will yield a moderate rent at 5 years purchase; the third sort of houses which will yield the rent, may be reckoned at 6 years purchase. And according to this account you may know very well how to make your bargain for your advantage, either in buying or selling these foundations.

And you will finde this way much more certain than reckoning of them by the foot, either in front only, or in front and depth, which will deceive you, and gives too low an estimate of these foundations.

For now, suppose the house mentioned before, being about 16 foot in front, standing in some high street in a good place, you may think that 10 shillings a foot, that is 8 pound a year; and this reckoned at 20

years

years purchase which comes to 160 pound
to be a good and sufficient price for the said
ground; and this is as high a rate as most
men will judge it that way. Whereas I
have proved plainly, that if the house yields
but 50 pound a year, and reckon the ground
but at 5 years purchase, it will come to 250
pound. But if the house yield 60 pound a
year, then at 5 years purchase the ground
is worth 300 pound, and at 6 years pur-
chase (which it may be reckoned at in some
places) it comes to 360 pound, which is a-
bove twice the price the other way.

If you reckon these foundations by the
foot, not only in front, but in depth; as
the front being about 16 foot, and the depth
32 foot; these two multiplied together
make the content of the foundation to be
512 foot. Now who would judge so small
a parcel of Ground as one foot square to be
worth 10 or 12 shillings; men rather ac-
count it but at 3 or 4 shillings. But if you
reckon it at 10 shillings a foot, it will yield
but 256 pound, which is the lowest rate that
it can be worth, being reckoned the other
way.

And thus I hope I have fully and plain-
ly resolved this question, having been the
more large in it, because it is a question
wherein so many are concerned; and
being

being the foundation of all the reſt, which ſaid muſt uphold and help us in the reſolution of the following caſes.

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## *The ſecond Queſtion.*

A Landlord having a plot of Ground but wanting money to build, and being not willing to ſell, hath found out one that will build upon it, who can lay no claim or title to the Ground: Now the queſtion is, what rent, and what term of years may be fairly given and taken between this Landlord and his Tenant, in conſideration for his building the houſe upon the ſaid ruined foundation?

In anſwer hereunto, Firſt, Conſider that it cannot be expected that any leſs rent ſhould be paid, than the yearly value of the ground is worth; which, by what was ſaid before, may be accounted to be a third part of the former yearly Rent: ſo that if the houſe was formerly worth 60 pound a year, then 20 pound may be at leaſt allowed for the yearly rent hereafter.

Secondly, If the Tenant be at the whole coſt and charges of building the houſe, there is as little reaſon that he ſhould pay any more rent than the Ground Plot it ſelf

is

is worth: for so he should pay rent for
own money bestowed in building the
house.

Thirdly, It is plain therefore that
Landlord should allow him such a compe
number of years, that may bring him in
cost and charges again, by the abatem
of the two thirds of the former rent;
so the former rent will be satisfied, one th
being to be paid for rent to the Landlo
and the other two thirds being allowed
the building of the said house.

Now the stress of the question is, w
number of years may be allowed and tak
in this case?

For answer hereunto, your best way w
be to reckon it up after this manner.

Suppose the house aforesaid to be wor
60 pound a year, a third part thereof bei
20 pound, may be reserved for the rent
the other two thirds being 40 pound
year, is to be bought our (as it were by w
of a fine) being to be laid out in buildi
the house. Now this 40 pound a year,
10 years, comes to 400 pound, and w
be sufficient to build the house: so that
appears that the Landlord is to allow hi
such a number of years in his Lease as ma
be worth 10 years purchase; and so the Te
nant by his building doth purchase the a

bate

statement of 40 pound a year, and payes only 20 pound a year rent.

Now the question is, how many years Lease may be allowed for this 10 years purchase?

To resolve this, you shall finde by my Tables of purchase, that a Lease of 21 years is worth 10 years purchase after the rate of 8 *per Cent.* And so long a Landlord may very well give; but a Tenant will hardly be content to take it, though hereby he makes 8 *per Cent.* of his Money. For most men are apt to reckon these short Leases at too low a rate, and will give greater Fines, and bestow their cost more willingly upon a longer Lease, though it appears by the Tables, that a longer Lease is not worth so much more as men ordinarily value them at.

But I suppose that a Lease of 31 years, will be a very fair and reasonable time, as any Tenant in this case can demand; whereby he shall have almost 10 pound *per Cent.* for his money, as you may see by the Tables of 10 pound *per Cent.* And these houses, if well and strongly built, according to the Act (by the blessing of God) will not be so subject to that great and common casualty of Fire as formerly; and so the money laid out upon them will be so much the more

safe

safe and sure. Longer time than this would wish none to allow; and the Landlord may well think this time too long, being forced (perhaps to make hard shift) to live upon the third part of his former all this while.

And therefore if the Landlord be a way able, it will be better for him to himself, than grant longer Leases: or the Landlord and Tenant joyn both together in building, then for every hundred pound laid out by the Landlord, he require more rent by ten pound a year the foresaid ground rent: and for every hundred pound laid out by the Tenant, is to pay the less rent by ten pound a year what the former rent of the house was and so to build upon a Lease of 31 years. This I conceive is as fair and equal terms as can be desired on both sides.

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## *The third Case or Question.*

IS, Concerning controversies between Landlord and Tenant, where there is engagements by Leases, either with fines or without fines.

These cases are much more difficult than the former, where there is no engagements;

and if men should exact and stand upon the rigour of the Law, many men might receive much wrong and damage; and therefore the honourable Parliament hath taken especial care for the more equal and reasonable regulating of these Controversies. I shall not herein intrench upon their Office, neither can I binde any to follow my advice, any farther than they see it right and equal; and so by this means (perhaps) I may save them and others much pains and trouble, in hearing and pleading these controversies.

In the first place it must needs be granted, that by the rigour of the Law the Tenant may be enforced to build: for he being bound by his Covenants to repair, support, maintain, and uphold the house; and at the end or expiration of his Lease or forfeiture of the same to deliver the house unto his Landlord repaired, supported, maintained, and upheld: how can he do this when the house is burned down, without new building the same.

And this, though it may seem very harsh in some cases, yet it may thus be pleaded for.

First, that no man will take a Lease of an house, and enter into the engagements, but he hath some reason or considerations

to

to encourage and provoke him thereunto either by the worth of the peny worth, the conveniency for his Trade and Living or to avoid the trouble and charge of removing, or some such considerations.

Secondly, no man doth take an house by Lease, but he must needs look to be at some cost and charges by ordinary reparations and many casualties which may happen by Winds and Tempests, blowing down Chimneyes and corners of houses, which I suppose men make no question but they are bound to repair.

Thirdly, were it not for these Covenants many Tenants would neglect these reasonable and necessary reparations, and suffer houses to go to ruine in a little time, to the great loss and damage of the Landlord.

Lastly and chiefly, many houses which belong to the City, and publick Societies, Halls, Hospitals, Colledges, and such like are usually let at a small Rent, and a moderate Fine; and it is very fit such Tenants should be bound to good reparations. And this I suppose was the first beginning, and reason of these manner of Covenants when Rents were low and reasonable, that men desired to have Leases of them, and were willing to be at the cost not only of repairing, but of re-building, and buildi-

ne

new Structures upon them. And so afterward, though rents did grow higher, yet Landlords would still tye men to the same articles and Covenants, without any respect to the goodness and badness of the bargain: all kinde of Leases being generally made in the same form and words, which the Tenant in regard of the commonness thereof, binds himself thereunto, taking them only for words of course, without due consideration thereof.

But this is very unjust and unreasonable, especially where men pay great Rents, or buy them out with great Fines. For if Landlords could, and really and intentionally did so binde all their Tenants, then why should not Houses be valued at as high a rate as Land; whereas the undervaluing of houses is upon the account of the charges that may happen by these casualties and dilapidations. Now if the Landlord have his allowance for it in buying, then the Tenant hath no reason to be bound to stand to the cost and charges thereof, unless he be very well allowed for it in his Rent or Fine.

Besides, The Landlords must consider that their houses will grow old, and Tenants will not alwayes take them on these termes, but they must pull them down and build them many times at the expiration of their Leases.

Last-

Laſtly, In this general calamity when in all men have too great a ſhare, it is n fit that any ſhould be unreaſonably oppre ſed; but that as near as may be, there may an equality in the loſs and charges, that the burden may be the more eaſily unde gone by both parties, which is the intent the Act of Parliament for this purpoſe.

Now the buſineſs is to propoſe ſome rul or directions how this may be done, whic I ſhall do in two caſes, which will inclu moſt particulars.

Firſt, where there is a great rent pa yearly, and but little or no fine.

Here let the charges of the houſe to b built be conſidered, and being known, let be divided into three equal parts. One thi part of theſe charges the Landlord may pa becauſe (as I ſaid before) theſe houſes a allowed for in the buying and purchaſin thereof to be ſubject to caſualties, an therefore are ſold at 13 or 14 years purchaſe whereas Land is ſold at 20 years purchaſe: that they are a 3d. part cheaper than Lan

The other two thirds may equally be d vided between the Landlord and the Te nant, and ſo the Tenant will be at one thi part of the charges of the Building: upo theſe terms either the Landlord, or the Te nant may build, and the Tenant may tak

a new Leaſe thereof at the former Rent, for 21 or 31 years; or elſe give up his whole right and intereſt to his Landlord, paying his third part toward the charges of the building, as they ſhall agree between themſelves.

This agreement (I ſuppoſe) will be very indifferent and reaſonable, for moſt perſons included in this caſe, eſpecially if the houſe was any thing ſtrong and good, and at any reaſonable rent: for the Tenant being bound, muſt not think to eſcape ſcotfree, though he would renounce his claim to the houſe: and where the Tenant hath a minde to claim any intereſt in the houſe, he cannot well deny to pay one third part of the charges of the Building. Likewiſe, the Landlord, though he pay two thirds of the charges, yet may conſider, that what the Tenant layes out is all loſt (as it were) unto him, and he ſhall not receive one peny of it again, but muſt ſtill keep on paying his rent as formerly: But the Landlord will be upon the receiving hand; and though his houſe may be ſo much the dearer to him, yet it ſtill yields him a good income of Rent.

The ſecond of theſe caſes is where the Tenant hath paid a conſiderable Fine, and ſo may be more ready and earneſt to make his claim of the Landlord; and yet alſo

payes

payes a considerable rent, above the wo
of the ground rent.

In the deciding of this controver
First, the charges of the building had b
to be divided (as before) into three eq
parts, and so the Tenant to pay one thi
part thereof, and the Landlord the oth
two: and so the Tenant paying the sa
rent as formerly, to enjoy it for the remai
der of his Lease.

If the Lease be short, then according
the former fine, the Tenant may rene
his Lease, and make it up 21 years. As
example, Suppose a Tenant hath paid 10
for a Fine, for a Lease of 21 years, a
nine years thereof are expired, and so
years are remaining.

For the accounting hereof you may ple
to take notice, that these Fines may
made and allowed for, according to t
Table of 8 *per Cent.* which allows 10 ye
purchase for 21 years: by which reckoni
100 pound Fine cuts off 10 pound a ye
from the Rent; and so every 10 pound o
off 20 shillings. Now this Table shew
that 1 *l.* for 21 years is worth 10 *l.* or 1
years purchase; and likewise that 1 *l.* fo
12 years remaining is worth 7 *l.* 10 *s.* tha
is, 7 years and an half purchase: so th
every 10 *l.* of the Fine which was paid fo
th

the whole 21 years is worth 7*l.* 10*s.* for the 12 remaining years.

Now then, as 10 times 10 pound makes an 100*l.*

So ten times 7*l.* 10*s.* make 75*l.*

Which taken out of 100, rests 25*l.*

So that there is 75*l.* due to the Tenant of his foresaid Fine of 100*l.*

Now if the Tenant will enjoy the house and have his Lease made up again to 21 years, at the same rent as formerly: then he must pay a third part of the charges of the building, and make up his Fine again 100 *l*, by adding 25 pound to the said 75 pound, which makes it 100 pound.

But if the Landlord agree to buy out the Tenant, then the Landlord must allow the Tenant his 75 pound out of his third part of the charges, which the Tenant is to pay toward the building of the house.

And thus going by the Table of 8 *per cent.* you may reckon what is to be allowed for any Fine, for any number of years, reckoning every 10 pound of the Fine for 21 years, to be worth the sum set against the remaining number of years.

Thus, if there be but 5 years remaining of the said Lease, against 5 years you finde 3 *l.* 19 *s.* 10 *d.* that is almost 4 *l.* and so for every 10 *l.* of the Fine you must reckon

kon 4 *l.* which for the 100*l.* comes to 4
So much being good to the Tenant of
former Fine.

This way and manner of reckoning
agreement, will I conceive be very fair
reasonable for both parties, if the Lease
made for no longer time than 21 years.

But if any Tenant that desires to bu
would have a longer Lease, and will
agree upon those terms, but will have
Lease of 31 years, I would not wish th
Landlord to stand off, and so hinder
house perhaps a year or two building;
there is not much above a years purch
difference between a Lease of 21 and
years; which in accounting the Fine,
come to much, and yet will be a great
couragement to the Builder.

Likewise, if any Landlord would eng
his Tenant to lay out more than his th
part or proportion; then for every 10
which the Tenant layes out more than
third part, the Landlord may well ab
him 10*l.* a year rent, upon a Lease of
years: yea, rather than hinder his bu
ing, he may abate so much upon a Lease
31 years, provided the Rent remain
will counter-value the Ground Rent, whi
I stated before to be a third part of
yearly Rent, reckoned at the full val

For I
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build
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der to
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For I shewed before, that any man (though he have no interest in the Ground) yet may build upon a Lease of 31 years, and pay one third part of the full rent of the house.

But all this which I have said must be understood of such houses where the Fines are so moderate, that they do not too much diminish the yearly rent: For in other cases where men pay but 10. or 20*l.* rent, for an house that is worth 40. or 60*l.* there must be some other rules to direct you.

But these for the most part being such as belong to the City, or Companies, or some publick Rents; I make no question but they will use their tenants much better than I can prescribe them. What I write is for private persons, that they may know the true value of things between man and man, and may more reasonably demand it.

Only you may take notice of what I said before, that if the yearly rent do not amount above the third part of the true worth thereof, then any one may venture to build upon a Lease of 31 years; especially having hopes to renew his Lease hereafter at a reasonable Fine.

And yet considering many of these Leases are looked upon, and have been formerly esteemed as good as some Coppy-holds, having been let at low rents, and very rea-

ſonable Fines, I doubt not but the Tenants who have received the chief loſs hereby will finde as much favour as formerly from their Landlords: ſo that where the Parliament in ſome caſes allows the Judges between man and man to give 40 years time, they will alſo be as forward and ready to to give full encouragement and ſatisfaction to their Tenants to the utmoſt of their power.

And indeed ſuch Tenants who have lately paid a good round Fine, or have a very long time in their Leaſe; as many City Leaſes which were lately inlarged to 61 years, and have yet above 40 years in their old Leaſes already) will have all the loſſe lie upon them, if they have no ſatisfaction and allowance given them from their Landlords, towards their charges in the building

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*The laſt Queſtion about theſe Buildings will be concerning the coſt of the Party-Wall between houſe and houſe, what may be the plaineſt way of reckoning it up; ſo that every man may ſee what is his due to pay.*

NOw to this purpoſe you muſt underſtand that Bricklayers uſe to reckon their work by the Pole, which is 16 foot and a half

half ſquare every way, and 3000 of Brick will make a Wall of a pole ſquare, of the thickneſs of one Brick, 4500 will make a Wall of a Pole ſquare, whoſe thickneſs ſhall be one brick and an half. And 6000 Bricks will make a Wall a Pole ſquare, whoſe thickneſs ſhall be 2 Bricks: ſo that if you know how many Pole there is in the Wall; by the thickneſs thereof you may know the number of the Bricks, and thereby the coſt of making thereof.

But this meaſuring by the Pole, though it may do well in a long Wall of a Garden or Park, yet in meaſuring of the Wall of an houſe is very inconvenient; and the parts thereof will not be ſo plain and exactly meaſured as by ſome leſſer meaſure; whereby you may more readily and exactly meaſure every ſtory in an houſe by it ſelf, according to the different thickneſs of the Wall.

Now, this I would adviſe to be done by the Foot, namely that you meaſure how many foot long, and how many foot high the Cellar is, and all the other Stories in the houſe, and then the following Tables will ſhew you (according to the thickneſs of the Wall) how many Bricks your neighbour is to pay for towards his Party-Wall. For which theſe two Tables, will very well

ſerve for theſe Walls are to be made part
them 2 Bricks thick, part of them one a
an half thick. Now where the Wall is
Bricks thick, there the Table of one Bri
thick will ſhew the half thereof; a
where the Wall is one Brick and an h
thick, there the other Table of three qua
ters of a Brick thick, will ſhew the numb
of Bricks to be accounted for the half of t
Wall.

Now knowing the number of the Bric
which go to the making of the Wall, y
may eaſily reckon the coſt of the Mor
and Workmanſhip thereof, and ſo reck
up the coſt of the whole, which you w
finde to be about 30ſ. for every 1000
Bricks, Bricks being now ſomewhat de
about 18 or 20ſ. a thouſand.

Thus for example, Suppoſe an houſe
the biggeſt rate, the ſide-wall thereof b
ing 30 foot long, and you would know h
many Bricks are to be paid for towards t
party-wall.

Firſt, meaſure the Cellar, where the W
is to be 2 Bricks thick, the length thereo
30 feet, and the depth 7 feet, finde t
length in the ſide, and the depth in the t
of the Table, and in the ſquare meetin
the Table for one Brick thick, you ſhall fi
2314 Bricks are to be paid for.

Th

Then the first Story being likewise 30 foot long, and 10 foot high, and also 2 Bricks thick, the same Table shews for the allowance for this, 3306

The second story is also 30 foot long, and 10 foot and an half high, but the Wall is to be but a Brick and an half thick; the half whereof is 3 quarters of a Brick: and this in the Table of 3 quarters of a Brick, yields for 30 foot long, and 10 foot high, 2479

And for the half foot more in heighth 124

The third story is 9 foot high, and 30 foot long, being likewise a Brick and half thick; and for this the Table shews the half to pay for is 2231

The fourth story is 8 foot $\frac{1}{2}$ high, and 30 foot long, for the 8 foot the Table shewes 1983

And for the half foot 0124

All which added together, make 12559 which are to be paid for the half of the party Wall, which at 30*s.* a thousand comes to 18*l.* 16*s.* 9*d.*

Thus you may see what any party Wall comes to, though your Neighbours house joyns never so little or much to your house, more plainly and exactly than you can by measuring by the whole Pole.

And whereas the Floors of the seve Stories adde somewhat to the height, y may adde somewhat for them according you finde them in thickneſs.

Laſtly, for the Garrets, the Walls tha of being one Brick thick, you may take h the number in the Table of one Bric thickneſs, and adde it to the reſt of the count.

All the difference that can be betwe one neighbour and another herein, will about the price of the Bricks, and the Li and Workmanſhip, which at the preſent very dear and uncertain, but if neighbo build together, they will eaſily determi it; if they do not, yet the firſt Builder ſufficiently provided by his Workmen tot ſtifie his coſt; and by the Act of Parli ment is allowed full ſatisfaction, with i tereſt from the time of his Building.

## A Table for one Brick in thickneſs, or the half of two Bricks.

The Walls heighth in Feet.

| Foot long. | ½ | I | II | III | IIII | V |
|---|---|---|---|---|---|---|
| | Bricks | Bricks | Bricks | Bricks | Bricks | Bricks |
| 1 | 5 | 11 | 22 | 33 | 44 | 55 |
| 2 | 11 | 22 | 44 | 66 | 88 | 110 |
| 3 | 16 | 33 | 66 | 99 | 132 | 165 |
| 4 | 22 | 44 | 88 | 132 | 176 | 220 |
| 5 | 27 | 55 | 110 | 165 | 220 | 275 |
| 6 | 33 | 66 | 132 | 198 | 264 | 330 |
| 7 | 39 | 77 | 154 | 231 | 309 | 385 |
| 8 | 44 | 88 | 176 | 264 | 353 | 440 |
| 9 | 50 | 99 | 198 | 298 | 397 | 496 |
| 10 | 55 | 110 | 220 | 331 | 441 | 551 |
| 11 | 61 | 121 | 242 | 364 | 485 | 606 |
| 12 | 66 | 132 | 264 | 397 | 529 | 661 |
| 13 | 72 | 143 | 286 | 430 | 573 | 716 |
| 14 | 77 | 154 | 309 | 462 | 617 | 771 |
| 15 | 83 | 165 | 331 | 496 | 661 | 826 |
| 16 | 88 | 176 | 353 | 529 | 705 | 882 |
| 17 | 94 | 187 | 375 | 562 | 749 | 937 |
| 18 | 99 | 198 | 397 | 595 | 793 | 992 |
| 19 | 105 | 209 | 419 | 628 | 837 | 1047 |
| 20 | 110 | 220 | 441 | 661 | 882 | 1102 |
| 21 | 116 | 231 | 463 | 694 | 926 | 1157 |
| 22 | 121 | 242 | 485 | 726 | 970 | 1212 |
| 23 | 127 | 253 | 507 | 760 | 1014 | 1267 |
| 24 | 132 | 264 | 529 | 793 | 1058 | 1322 |
| 25 | 138 | 275 | 551 | 826 | 1102 | 1377 |
| 26 | 143 | 286 | 573 | 860 | 1146 | 1432 |
| 27 | 154 | 309 | 617 | 926 | 1234 | 1543 |
| 30 | 165 | 331 | 661 | 992 | 1322 | 1653 |
| 40 | 220 | 441 | 881 | 1322 | 1763 | 2204 |
| 50 | 275 | 551 | 1102 | 1653 | 2204 | 2755 |

## A Table for one Brick in thickness or the half of two Bricks.

The Wall feet in height.

| Foot long. | VI Bricks | VII Bricks | VIII Bricks | IX Bricks | X Bric |
|---|---|---|---|---|---|
| 1 | 66 | 77 | 85 | 99 | 11 |
| 2 | 132 | 154 | 176 | 198 | 2[illegible] |
| 3 | 198 | 231 | 264 | 298 | 3[illegible] |
| 4 | 264 | 309 | 353 | 397 | 4[illegible] |
| 5 | 331 | 386 | 441 | 496 | 55[illegible] |
| 6 | 397 | 463 | 529 | 595 | 6[illegible] |
| 7 | 463 | 540 | 6[illegible]7 | 694 | 77[illegible] |
| 8 | 529 | 617 | 705 | 793 | 88[illegible] |
| 9 | 595 | 694 | 793 | 893 | 99[illegible] |
| 10 | 661 | 771 | 882 | 991 | 110[illegible] |
| 11 | 727 | 848 | 970 | 1091 | 121[illegible] |
| 12 | 793 | 926 | 1058 | 1190 | 132[illegible] |
| 13 | 859 | 1003 | 1146 | 1289 | 14[illegible] |
| 14 | 926 | 1080 | 1234 | 1388 | 154[illegible] |
| 15 | 992 | 1157 | 1322 | 1488 | 165[illegible] |
| 16 | 1058 | 1234 | 1410 | 1587 | 17[illegible] |
| 17 | 1124 | 1311 | 1499 | 1686 | 187[illegible] |
| 18 | 1190 | 1388 | 1587 | 1785 | 198[illegible] |
| 19 | 1256 | 1466 | 1675 | 1884 | 209[illegible] |
| 20 | 1322 | 1543 | 1763 | 1983 | 220[illegible] |
| 21 | 1388 | 1620 | 1851 | 2083 | 231[illegible] |
| 22 | 1455 | 1697 | 1939 | 2184 | 242[illegible] |
| 23 | 1520 | 1774 | 2028 | 2281 | 253[illegible] |
| 24 | 1587 | 1851 | 2116 | 2380 | 2645 |
| 25 | 1653 | 1928 | 2204 | 2479 | 2755 |
| 26 | 1719 | 006 | 2292 | 2578 | 2865 |
| 28 | 1851 | 22160 | 2468 | 2777 | 3085 |
| 30 | 1983 | 2314 | 2645 | 2975 | 3306 |
| 40 | 2645 | 3085 | 3526 | 3967 | 4408 |
| 50 | 3306 | 3857 | 4408 | 4959 | 5510 |

A Table for three quarters of a Brick thick being the half of a Brick and half thick.

The Wall Foot high.

| Foot long. | ½ Bricks | I Bricks | II Bricks | III Bricks | IIII Bricks | V Bricks |
|---|---|---|---|---|---|---|
| 1 | 4 | 8 | 17 | 25 | 33 | 41 |
| 2 | 8 | 17 | 33 | 50 | 66 | 82 |
| 3 | 12 | 25 | 50 | 74 | 99 | 124 |
| 4 | 17 | 33 | 66 | 99 | 132 | 165 |
| 5 | 21 | 41 | 83 | 124 | 165 | 207 |
| 6 | 25 | 50 | 99 | 149 | 198 | 248 |
| 7 | 29 | 58 | 116 | 174 | 231 | 289 |
| 8 | 33 | 66 | 132 | 198 | 264 | 331 |
| 9 | 37 | 74 | 149 | 223 | 298 | 372 |
| 10 | 41 | 83 | 165 | 248 | 331 | 413 |
| 11 | 45 | 91 | 182 | 273 | 364 | 455 |
| 12 | 50 | 99 | 198 | 298 | 397 | 496 |
| 13 | 54 | 107 | 215 | 322 | 430 | 537 |
| 14 | 58 | 116 | 231 | 347 | 463 | 578 |
| 15 | 62 | 124 | 248 | 372 | 496 | 620 |
| 16 | 66 | 132 | 264 | 397 | 529 | 661 |
| 17 | 70 | 140 | 281 | 421 | 562 | 702 |
| 18 | 74 | 149 | 298 | 446 | 595 | 744 |
| 19 | 79 | 157 | 314 | 471 | 628 | 785 |
| 20 | 83 | 165 | 331 | 496 | 661 | 826 |
| 21 | 87 | 174 | 347 | 521 | 694 | 868 |
| 22 | 91 | 182 | 364 | 545 | 727 | 909 |
| 23 | 95 | 190 | 380 | 570 | 760 | 950 |
| 24 | 99 | 198 | 397 | 595 | 793 | 992 |
| 25 | 103 | 206 | 413 | 620 | 826 | 1032 |
| 26 | 107 | 215 | 430 | 645 | 860 | 1074 |
| 27 | 116 | 231 | 463 | 694 | 926 | 1157 |
| 30 | 124 | 248 | 496 | 744 | 992 | 1240 |
| 40 | 165 | 331 | 661 | 992 | 1323 | 1653 |
| 50 | 207 | 413 | 826 | 1240 | 1653 | 2066 |

## A Table for 3 quarters of a Brick thick, building the half of a Brick and an half.

### The Wall foot high.

| Foot long. | VI | VII | VIII | IX | X |
|---|---|---|---|---|---|
| | Bricks | Bricks | Bricks | Bricks | Bricks |
| 1 | 50 | 50 | 66 | 74 | 83 |
| 2 | 99 | 116 | 132 | 149 | 165 |
| 3 | 149 | 174 | 198 | 223 | 248 |
| 4 | 198 | 231 | 264 | 298 | 331 |
| 5 | 248 | 289 | 331 | 372 | 413 |
| 6 | 298 | 347 | 397 | 446 | 496 |
| 7 | 247 | 405 | 463 | 521 | 579 |
| 8 | 297 | 463 | 529 | 595 | 661 |
| 9 | 446 | 521 | 595 | 669 | 744 |
| 10 | 496 | 579 | 661 | 744 | 826 |
| 11 | 545 | 636 | 727 | 818 | 900 |
| 12 | 595 | 694 | 793 | 893 | 992 |
| 13 | 645 | 752 | 860 | 967 | 1074 |
| 14 | 694 | 810 | 926 | 1041 | 1157 |
| 15 | 744 | 868 | 992 | 1117 | 1240 |
| 16 | 793 | 920 | 1058 | 1119 | 1322 |
| 17 | 843 | 983 | 1124 | 1264 | 1405 |
| 18 | 893 | 1041 | 1190 | 1339 | 1488 |
| 19 | 942 | 1099 | 1256 | 1413 | 1570 |
| 20 | 992 | 1157 | 1322 | 1488 | 1653 |
| 21 | 1041 | 1215 | 1388 | 1562 | 1736 |
| 22 | 1091 | 1273 | 1455 | 1636 | 1818 |
| 23 | 1140 | 1331 | 1521 | 1711 | 1901 |
| 24 | 1190 | 1388 | 1587 | 1735 | 1983 |
| 25 | 1240 | 1446 | 1653 | 1860 | 2066 |
| 26 | 1289 | 1504 | 1709 | 1934 | 2149 |
| 28 | 1388 | 1620 | 1851 | 2083 | 2314 |
| 30 | 1488 | 1736 | 1985 | 2231 | 2479 |
| 40 | 1983 | 2314 | 2625 | 2975 | 3306 |
| 50 | 2479 | 2893 | 3306 | 3719 | 4132 |

*A Table of Proportions for Brick Walls, in the building of all sorts of Houses in the City of* London, *according to the Act of Parliament.*

| The sorts of Houses. | Several Stories | Foot in height | B. length in thick. | B. length in thick. |
|---|---|---|---|---|
| The first or least sort of Houses, fronting bye-Streets and Lanes are to have. | Cellars | 6 1/2 | 2 | 1 1/2 |
| | 1 Story | 9 | 2 | 1 1/2 |
| | 2 Stories | 9 | 1 1/2 | 1 1/2 |
| | Garrets | | 1 | 1 |
| The second sort of Houses fronting lesser Streets, and Lanes of note, and the Thames side are to have. | Cellars | 6 1/2 | 2 1/2 | 2 |
| | 1 Story | 10 | 2 1/2 | 2 |
| | 2 Stories | 10 | 1 1/2 | 1 1/2 |
| | 3 Stories | 9 | 1 1/2 | 1 1/2 |
| | Garrets | | 1 | 1 |
| The third sort of Houses fronting the high Streets are to have. | Cellars | | 2 1/2 | 2 |
| | 1 Story | 10 | 2 1/2 | 2 |
| | 2 Stories | 10 1/2 | 1 1/2 | 1 1/2 |
| | 3 Stories | 9 | 1 1/2 | 1 1/2 |
| | 4 Stories | 8 1/2 | 1 1/2 | 1 1/2 |
| | Garrets | | 1 | 1 |

*The depth of the Cellars, and height of the several Stories.*

*The thickness of the Walls of each house in Front and Rear.*

*The thickness of the party-Walls between house and house.*

# *ERRATA.*

| Page. | Line. | Fault. | Correct. |
|---|---|---|---|
| 27 | 5 | 109 | 106 |
| 31 | 5 | 17.1 | 17.2 |
| 44 | 2 | cr the | of the |
| 52 | 12 | 566 | 5663 |
| 53 | 7 | 5555 | 55555 |
| 53 | 8 | 11 pence | 01. q |
| 60 | 6 | rate | rules |
| 68 | 30 | 10.53 | 10.35 |
| 71 | 30 | 11.2 | 1.12 |
| 87 | 17 | 5885 | 5945 |
| 88 | 13 | 18 | 182 |
| 92 | 21 | uſe | rule |
| 112 | 18 | as | one |
| 119 | 1 | 102 | 10 |
| 140 | 16 | 12 | 18 |
| 141 | 17 | of | or |
| 141 | 21 | and | adde |
| 142 | 4 | 1000 | 100 |
| 156 | 7 | 198 | 189 |
| 194 | 9 | 4,5958 | miſplac't |
| 196 | 14 | parts | pints |
| 205 | 4 | B | |
| | 5 | parts | B, parts |
| 204 | 12 | Comical | Conical |
| 218 | 18 | 118 | 128 |
| 224 | 12 | pence | pecce |

# THE
# Purchasers Pattern.

IN the buying and selling of Land, and in the letting and taking of Leases, either of Land or Houses, there are many things very considerable, which may all be reduced to these three general heads.

First, to the Law, to make the Bargain sure.

Secondly, to Reason and Judgment, to know the nature of the thing you purchase.

Thirdly, to Arithmetick, to find out the true value thereof.

My chief purpose herein is to speak of this last, referring you in the other two, to your own judgment, and the counsel of others: yet because I am loth to let those (who need some instructions herein, and will be willing to learn) go altogether without, I shall briefly speak somewhat to each of these.

And in the first place, as to matter of Law, take it as I finde it summed up in these few verses.

*First, see the Land which thou intend'st to buy*
*Within the Sellers title clear doth lie;*

*And that no woman to it doth lay claim,*
*By Dowry, Joynture, or some other name,*
*That may it cumber. Know if bound or fre*
*The Tenure stand, and that from each Feoffe*
*It be releas'd. That th' Seller be so old,*
*That he may lawful sell, thou lawful bu*
*Have special care that it not morgag'd lie,*
*Nor be intailed on Posterity.*
*Then if it stand in Statute, bound or no:*
*Be well advis'd what Quit-rent out must*
*What Custom-service hath been done of old*
*By those who formerly the same did hold.*
*And if a wedded woman put to sale,*
*Deal not with her, unless she bring her Ma*
*For she doth under Covert-baron go,*
*Although sometimes some also traffique so*
*Thy bargain being made, and all this done,*
*Have special care to make thy Charter run*
*To thee, thine Heirs, Executors, Assignes,*
*For that, beyond thy life, securely binds.*
*These things fore-known, and done, your*
*prevent*
*Those things rash buyers many times repen*
*And yet when as you have done all you ca*
*If you'l be sure, deal with an honest man.*

Much might be said to this in point
law; but neither my skill nor time will
ford it. It is the best way for every one,
to trust too much to his own skill, but to

the help of some skilful Lawyer, and knowing Scrivener. And I shall only adde this, that though the man you deal withal, have the repute of an honest man: yet trust not too much upon that; but be careful to have all the assurance made unto you, as if he were your utter enemy, or a very K.

IN the second place, before you can know the true value of the thing to be purchased, you must well consider the nature of the thing, and the casualties that it may be subject to; and so according to the goodnes and certainty thereof, you must cast up the price at a greater or lesser rate of profit.

And to this purpose in the first place, take notice, that the Rate allowed for Interest money, is the general ground and rule to estimate the value of any purchase by.

This was formerly in Queen *Elizabeths* dayes allowed to be 10 pound for an 100. But in King *James*'s time, it was, upon very good ground brought down to 8 pound for an 100. And now of late it is allowed to take but 6 pound Interest for an 100. Now as the Interest of money falleth, so the price of all kinde of purchases riseth. This you may see in the following Tables. And it must needs be so, because the less profit is allowed, the greater principal must be

expended to bring in the same profit. Thus when money was at eight in the 100 then 75 pounds would bring in 6 pounds a year, whereas money being but at 6 in the 100, an 100 pounds will bring in but the said 6 pounds a year.

But yet you must not think that this rate allowed for Interest money, is the absolute rule of all Purchases; but as formerly when money went at 8 for an hundred, yet Land was worth 18 years purchase: so now money is at 6 for the hundred, Land is worth worth 20 years purchase. And though men who thus lay out their money upon Land have but five in the hundred profit for their money, yet there may be good reasons given, why men should be willing so to do.

First, Because though every thing be subject to casualty in this uncertain world, yet an estate in Land is less subject to danger, and of more sure continuance both for a mans own life, and his posterity after him.

Secondly, It hath been hitherto, and is like to be so still, that the price of money falls cheaper, and the price of Land rises dearer: and that not only (as I said before) in proportion to the rate of Interest, but in respect of the value of the things themselves; in such wise, that a Farme that for

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merly was worth but 30 pounds a year, is now worth 50 pounds, or more. So that the old Rents of Land, may in a short time be much improved, whereby the Land-Lord may in a short time mend his bargain, if it be any good penny-worth when he bought it.

Thirdly, In point of Piety, many men had rather lay out their money in Land, though with lesser profit; then let it out to Interest: Because Usury, through the ill practises of many, hath gotten such an odious name, and been so generally condemned by many godly men.

Fourthly, there is much equity herein. For as men who have greater Stocks, and Trade by whole-sale, may live upon a lesser rate of profit then those who have but small Stocks, and Trade by Retail: So men who have great Estates, to buy Land therewith, may very well lay out their money at less profit then other men, and yet live better thereof. Thus a man that hath 4000 pounds, may purchase therewith 200 pounds a year, and may live better thereupon, though he have but five pounds in the 100 profit for his money; then he that hath an Estate of 1000 pounds in money, and puts it out to Interest at six pounds for an hundred, can live of 60 pounds the year-

by Interest thereof. And hereupon the Emperor *Justinian* made a Law that Noblemen and Earls should take but 4 pound Interest for 100. Artificers might take pound. Merchant Adventurers 12 pound and other men 6 pounds in an hundred.

And thus much for the price of Land general. Here in *England* it is worth years purchase. In other Countries, whe money is plenty, and land scarce, it may worth more; as in *Holland* land is wor 30 years purchase, and money scarce wor 3 or 4 *per Cent.* But in many other pla it is worth less. Yea, as I am informed *Lincoln-shire* very good land is sold for or 16 years purchase: these things the bu er and seller must consider of, and do the in, as their own judgment, and their casions, and opportunities offered, all them the best bargain.

IN the next place it may be considered, ter what rate Leases of Land are fit to be let. And that is according to the p sent rate of Interest money, whatever be; whether 5, 6, 7. or 8 in the hundr

For first, it is not fit that they should p more then their money will yield them because for the most part such Purchas are men of smaller Estates, and such as

the most part, do with much care, cost, and pains, get their Rent for their Land-Lords, who live many times at ease; and if their Land-Lord think they have too good a penny-worth, he wants not power and will to make him pay more for his next Bargain.

On the other side, it is not fit that these Leases should be let at any under rate, both because they are certain, and less hazard therein, then in laying out their money any other way: and also, because the Land-Lord himself gives a dearer rate; and so would hereby be too much damnified. And after this rate you must value all other Annuities which are certain, and assured by Lands.

THe next thing I shall propose to your consideration, is the rate which is to be observed in letting and selling of Houses. And herein it will be very requisite to consider of the many Casualties Houses are subject to.

As first from the Air, they are continually weather-beaten; and sometimes, by extraordinary winds and tempests, much rent and torn; so that in a short time they run to decay, if they be not continually kept in good repair.

Secondly, From the water likewise they receive continual damage, even by the ordinary showers of rain, which are subject to soke in, and rot, and spoil them, if not carefully prevented: and many times also extraordinary floods and inundations destroy them in a moment.

Thirdly, Though this destruction by water need not much be feared in many places; yet fire may be justly feared in all: which, if it once get the mastery, is a mercilesse enemy; and this it doth too too often, and is not to be prevented by all our own care and watchfulnesse, proceeding many times from the carelesnesse of a Neighbour, or an idle servant.

Fourthly, The Earth it self, though it be their best friend, and for the most part upholds them; yet many times for the sins of the Inhabitants it trembles under them, throws them down, or swallows them up. By this means, whole Cities are sometimes destroyed in an instant: and though this seldom happens in our Island, yet in Queen *Elizabeths* days there were three of these Earthquakes; and though, blessed be God, they did no great hurt, yet some they did in this particular.

But passing by all these petty and extraordinary Casualties, there is one more which,

which in my minde, is more to be consider-ed than all the rest; and that especially, if a man buy an house not for his own use and habitation, but to let it out to others. And that is, that many times a man shall meet with an ill Tenant, that will scarce pay his Rent; and sometimes it may stand empty without a Tenant, and so bring in no profit at all; and also hereby it runs more speedi-ly to ruine. And this case is so much the more considerable, because it is so ordinary; and for this very reason, an house that stands void, is not worth so much by at least a years purchase, as another house that hath a good Tenant in it; and it is so much the worse if the house stands not in a good place, where it is like to be long without a Tenant: howsoever a year is quickly gone, and a year lost at the beginning, is worth as much as three or four afterward

All these things, though men do what they can to prevent them, and shift them off from themselves by Fines and Leases; yet they must needs fall either upon the Land-Lord or the Tenant, and many times fall heavy enough upon both.

For these and such like reasons, it was the usual custom, when money was at eight in the hundred, to let Leases of Houses of 21 years, for 7 years purchase. By which reck-

kon'ng (as you may see by the Tables following) they allowed about 13 in the hundred for the profit of their money to the buyers. For in the Table of 12 in the hundred, one pound yearly rent for 21 years is worth 7 pounds, 11 shillings, 2 pence which is above 7 years and an half purchase, therefore bare 7 years purchase yield more profit, and is much about 13 in the hundred.

Now if this rate of 12 or 13 *per Cent* profit were thought fit when money was at eight in the hundred; then, now money at six, such Leases may very well be let after the rate of ten in the hundred. And one pound yearly rent to continue 21 years is worth 8 pounds, 12 shillings, and 1 pence; that is, 8 years, and an half, and somewhat more purchase. And this I suppose to be the fittest rate for most ordinary houses.

But yet since some houses being new and strongly built, need little or no reparations; and others, being old and decayed need great and costly reparations, and many times must be partly new built, since those things lie commonly upon the Tenant, the better sort of houses will be worth more, and the other less. So that the prize of all these Leases of Houses, may be re-

kon-

koned after the rates of 8, 9, 10, or 12, *per Cent.* as the foresaid casualty shall require.

And to conceal nothing from you in this point; the chief thing to be looked upon in this particular, is whether the yearly rent of the house be rated at such an easie rate, that the house is very well worth it, and will yield rather more than less: in this case the house may be worth a year or two years purchase more than otherwise. But if the house be rated according to its utmost value, it will be a dear penny-worth to give above the rate of 10 *per Cent.* for it.

It may perhaps be objected against this, the great cost which men are at in building of Houses, so that if Leases of them yield no better rate, those who are at the cost to build them, will scarce have five or six in the 100 for their money laid out upon them.

To this it may be replyed, that Houses are things from whence the Tenant, for the most part, receiveth little or no profit, being chiefly sleeping holes to defend them from the injury of the weather; for which purpose many times less costly houses would serve the turn. And therefore whatever men may lay out upon the building and beautifying of them, for their own pleasure and accommodation, yet it will be the part

of

of every wise builder, to lay out no more thereon, then is fitting and necessary, according to the place it stands in; that so the yearly rent may bring in some considerable profit, at least to the rate of eight in the hundred.

As for publick Buildings, either for strength or ornament, they are not to be measured by so private a Standard.

Also if any well-affected persons, or Corporations, having stocks of money lying by them, shall build in convenient places, or Towns wasted by fire, houses somewhat above the degree aforesaid; such men, though they receive less profit, yet they deserve more praise.

But as for those that lay out so much upon their private Houses, that many time they would be glad to sell them again for half their cost, they may thank themselves for their loss, and may well be accounted fooliſh Builders, that did not consider beforehand, whether their gain would countervail their Charges.

By what hath been said, you may perceive that Leases either of Land or Houses are the most profitable Tenures for the ordinary sort of men. But yet you may desire to know whether an ordinary Lease of 21 years, or a longer Lease of 40, 50, or 60 years be best.

I ſtart this queſtion, to lay open the error of many men, who proceed in theſe Bargains without ſufficient knowledge in point of art. And from hence it is that one concludes that a ſhort Leaſe is moſt profitable, which he thinks thus ſufficiently proved.

Saith he, Suppoſe a man hath 1000 pounds to beſtow upon a Leaſe, if he will purchaſe a Leaſe of 100 years, it will coſt 13 years purchaſe at the leaſt: ſo your 1000 pounds will buy but 77 pounds a year, which doth not amount to the Uſe of your money after the rate of eight in the hundred: Whereas, if you will buy a Leaſe of 21 years, you may have it for ſeven years purchaſe, (money being at the foreſaid rate) ſo your 1000 pounds will purchaſe you a Leaſe of 140 pounds a year, which is 60 pounds a year more than the Uſe of your money will come unto. So that in the longer Leaſe you will loſe three pounds a year, and by the ſhorter Leaſe, you will gain threeſcore pounds a year; more than your money will yield at Intereſt.

This reckoning, I confeſs, is true according to theſe erroneous rules, by which moſt men make their bargains: and ſo for want of better knowledge, oftentimes run themſelves into very great damages. The chief cauſe

cause whereof proceeds from mens sett
too low a price & value upon a short Le
and too high a price and esteem upo
long Lease, which is only for lack of
And perhaps men may be deceived her
reasoning thus with themselves. If a
gives 7 years purchase for a Lease of
years, it is 7 years before he receive
principal money again, and then he h
but 14 years more for the increase ther
and in all the 21 years he receives his
ney laid out but three times over: Wh
as, a man giving 13 years purchase fo
Lease of 100 years; though it be 13 ye
before he receive his principal in again
then he hath 87 years of clear profit, and
the whole 100 years, receives his mo
laid out almost eight times over.

But this reason deceives men in consid
ing too much of the often return of the
ney, and too little of the length of the ti
For he that hath a Lease of 21 years,
seven years purchase, it is true, he can
that 21 years make but a threefold ret
of his money: but then after those 21 ye
he may make such another bargain for
years more, and so return his money thr
times more. And so continuing to do,
105 years he may return his principal la
out 15 times over, ten times whereof will b

clear

clear gains: whereas the other ſhall gain little more than half ſo much.

Thus you ſee, if you count aright, it is manifeſt, there is a very great diſ proportion between the price of the long Leaſe, and the price of the ſhort Leaſe; which ought not to be ſo. For what reaſon is there but that a man ſhould have as good a penny-worth in a long Leaſe, as in a ſhort one: And I ſuppoſe the intent both of buyer and ſeller is that it ſhould be ſo: but all the fault lies in thoſe falſe rules and cuſtoms, which may with much right and reaſon be amended by Art.

The truth therefore is, the ſhort Leaſe is much undervalued; and the long Leaſe is much over-valued. For in the ſhort Leaſe, the buyer hath after 13 in the hundred allowed him for the profit of his money; whereas in the long Leaſe he hath not after 8. And the reaſon of this over-valuing the long Leaſe, is either for want of skill, or conſideration what the mony in that time, at Intereſt upon Intereſt will come to. Indeed all men have not time or skill to caſt it up; and there is much want of Tables of ſufficient length for this purpoſe, moſt Tables not exceeding 31 years. And this was the chief reaſon of my writing, and therefore I have inlarged my Tables to 100 years apiece,

apiece: yet not all in single years, beca
the difference would be but small, in m
of the years, and may be supplied well
nough by estimation and proportion.

Now by these Tables you may plai
see, that however men may esteem of a lo
Lease, yet in most of these Tables, a Lease
100 years is worth but little more tha
Lease of 60 years; and a Lease of 60 ye
is worth but little more than a Lease of
years.

As for Example, in the Table of ten
the 100, the price of one pound to cont

| | | | |
|---|---|---|---|
| Twenty one years is, | 8. l. | 12 s. | |
| Thirty one years, | 9 | 9 | 7 |
| Threescore years, | 9 | 19 | 4 |
| And 100 y. not full, | 10 | 0 | 0 |

But you will say, this is very strange, a
few men think so.

I grant it, but the reason hereof is, beca
men do not consider the profit which the
money may yield them in so many yea
For though it be not allowed to take ten
the hundred yearly for money; yet the
who have any employment for their mon
otherwayes, may very well make at lea
ten in the hundred of it: and after this re
koning, one pound in 60 years will com
to 300 pounds, and in 100 years to 137
pounds; and on the other side, the Reve
sion o
gate, i
hence,
a farth
By
of Art
man a
of an
gain
too ch
to the
there
kinde
be tha
follow
(you
or oth
wron
buyin
In
false
taken
good
short
long
least
lease
Leas
wha
en jo
sion

sion of one pound 60 years hence, at this rate, is not worth a penny. and at 100 years hence, it is not worth the fourteenth part of a farthing.

By this you may see there is great need of Art, whih like an equal Umpire, between man and man, may declare the true value of any lease for any time; so that one bargain shall not be too dear, and another too cheap, but each have a due proportion to the time of years; and so in this respect, there is no more advantage or profit in one kinde of Lease more than in another. But he that will not be ruled by Art, but will follow these, or such like false Rules, must (you see of necessity) either wrong himself or others, yea, and before he is aware, may wrong himself as soon as another, either in buying or selling such bargains.

In answer therefore to this question; this false conclusion and unjust practice being taken away, so that a man may have as good a penny-worth in a long Lease, as in a short Lease; it will plainly appear, that a long Lease for the most part is the best (at least) for the Tenant. For suppose it be a lease of Land, the Tenant having a long Lease, may, and will strive to improve it what he can, because he is in hopes long to enjoy it, & receive the benefit thereof. And

all

all this will be no great hurt to the La
Lord, unless he be too greedy after g
Fines, or loves alwayes to be raising his
nants rent, and so many times as they
poverish their Tenants, their Tenants
pair their Land.

Indeed for Leases of Houses the c
more difficult, for they many times ca
well stand out a long Lease; but yet
man must take such an house that wil
quire new building, either in whole
part, he had better then, have a long L
thereof, that so he may the longer and
certainly enjoy it, after his cost and
bestowed upon it.

On the other side, when a man h
short Lease eith r of Land or an Hous
dares not do what he would to impro
lest his Rent should be raised, or he t
out by the greedy covetousness of his L
Lord, or the envious greediness of
evil neighbour.

If any one hath an ill bargain of
long Leases, it is the Land-Lord; and
is not so much because he shall rece
few Fines, but rather by his taking too
Fines of his Tenants, and so by the Fi
cut off so much the more of his yearly
venue.

For you see that for all the money

Land
Lease
only
at In
ten in
so fas
most
latter
in va
It
Lords
Fines
to bi
gains
their
Leas
best
of F
nant
T
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T
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In
L

Land-Lord receives for the Fines of those Leases, he rebates his Tenant for it, not only after the rate of simple Interest, but at Interest upon Interest, at six, eight, or ten in the hundred, which you see increaseth so fast in 50 or 60 years, that it eats out almost all the principal Rent, and makes the latter half of the years to increase so little in value.

It is the best way therefore for Land-Lords, in these Leases, not to take over great Fines, but such as may be only sufficient to binde their Tenants to keep to their bargains, and make them careful to perform their Covenants, lest they forfeit their Leases, and lose their Fines. And this is the best and most politick end of these manner of Fines. And this will be best for the Tenant, and no hurt to the Land-Lord.

THere is one question more about the buying of Houses, and that is, that if such long Leases of them do yield no more, what may be the value of them to buy them out right?

To judge the better of this, you must consider the strength and goodness of the house, and the Materials of which it is built; whether Timber, Brick, or Stone; In which respects some houses are able to

stand

ſtand many ſcores (if not ſome hundreds of years more than others, and when it comes to be pull'd down, theſe materials may be worth ſomewhat, or ſerve to the new building thereof again. Now he that hath only a Leaſe (though it be a long Leaſe) yet he hath none of this profit, but is bound to be at charge to uphold and maintain it in good order as it was delivered to him.

Again, ſuppoſe theſe things are little worth, yet the very ſpace and quantity of ground whereon the houſe ſtands, may in many places be very conſiderable, inſomuch that it is ordinary for men to build upon a Leaſe of 31 years, and yet pay a good and reaſonable Rent to their Land-Lord beſides. Upon theſe accounts, the purchaſe of the houſe out-right, may well be worth two or three years purchaſe, more than a Leaſe for an hundred years. So that though long Leaſes be not worth above 10 years purchaſe: yet the Fee-ſimple of an houſe may be worth 12 or 13 years purchaſe.

THere is another thing ſomewhat conſiderable in the buying of Land and Houſes, and that is the Taxes which for the preſent lie heavy upon them. But this I hope by Gods bleſſing in a ſhort time will be

ten off, so that it will be needless to give any rules about it. Yet to satisfie men in this, I shall set down this rule briefly. First, the taxes being known what they come to yearly, may be substracted from the outmost yearly value of the Land or House; and so what remains, you may safely purchase according to the rules aforesaid.

Yet since they may be taken off in good time, I would wish no man to be over-hasty to sell thus; but at least to divide the burthen of these Taxes, between his Customer and himself.

THere is another way of purchasing Land or Houses, by buying Lives therein, and this is the ordinary rule for it. One life in any thing is accounted of equal worth to a Lease of seven years. Two Lives are worth as much as a Lease of 14 years. Three lives are worth as much as a Lease of 21 years. And so still increasing by seven years for every Life.

But this way of reckoning seems to me somewhat unequal, since one or two may live as long as eight or ten, why should there be so great a difference accounted? I confess a mans life is very uncertain, and therefore I would wish every one to take heed how they deal in such a way of purchasing:

chasing: but yet considering on the
side, that by this means one is provided
as long as he lives, and when he is dea
need take no care: and on the other
that if he be any thing young, or like
live at all, he may live 20 or 30
what reason is there that the seller
be at so much hazard, as to venture 3
for a single life.

Again, though two are better than
and *A threefold Cord is not easily broke*
it is not altogether so in mens lives,
many times three or four may die s
than one, herein the Buyer runs some
zard, which though with more reason
the Seller before, yet it is fit he
have some consideration for it.

Therefore in my minde it were m
qual, if a single life were rated as a
of 12 years, or ten at the least, and
any more lives to decrease one year for
ry life. And so they will be worth, as in
little Table.

| | | | |
|---|---|---|---|
| 1 | | 12 | 10 |
| 2 | | 23 | 19 |
| 3 | | 33 | 27 |
| 4 | *Lives are of equal* | 42 | 34 |
| 5 | *worth to a Lease of* | 50 | 40 |
| 6 | *these Years, accor-* | 57 Or | 45 |
| 7 | *ding to the foresaid* | 63 | 49 |
| 8 | *Rules and Tables.* | 68 | 52 |
| 9 | | 72 | 54 |
| 10 | | 75 | 55 |
| 11 | | 77 | |
| 12 | | 78 | |

Thus much for these pre-considerations: I shall now set the Tables before you, shewing you the true value of any thing according to the true Rules and Rates.

But in the first place, I shall set before you the manner of the construction and calculation of these tables, that so I may leave no just exceptions against what I have said or shall say in this point.

The best and most artificial way to make these Tables, is to finde certain numbers in continual proportion decreasing, according to the rate of the Interest propounded, which numbers may shew the true worth of one pound principal at the end of any number of years. And then by addition of all these numbers one to the others, the foresaid

chasing: but yet considering on th
side, that by this means one is provide
as long as he lives, and when he is de
need take no care: and on the other
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said

ſaid Table of Purchaſes from year to ye
produced, which becauſe they come o
in *Decimals* of pounds, you may after
reduce into pounds, ſhillings, and pen

Thus let the rate of the Intereſt
pounded be 6 in the 100, theſe num
will be thus found.

*As* 106 *l. to* 100 *: So* 1 *l. to* 0,943

You may increaſe theſe fractions a
as you will for the more exactneſs.
thus much is 1 pound worth at the e
one year.

Then for the ſecond year,

As 106, to 100 : So 9434. to 890
which is the worth of one pound at the
of two years, ſo theſe two added tog
make 1, 8334, which is the worth of
pound Anuity to continue two years.

So again do for the third year.

As 106 to 100; ſo, 8900, to 839
which added to the former makes 2,67
which is the value of three years.

And ſo you muſt do for every other
as long as you make your Table for.

As you may ſee by this ſhort Table
years at 6 in the hundred.

| *The decrease, or worth of the Reversion.* | *The worth of the Purchase by Addition.* |
|---|---|
| 1 ,9434 | 0,9434 |
| 2 ,8900 | 1,8334 |
| 3 ,8396 | 2,6730 |
| 4 ,7921 | 3,4651 |
| 5 ,7472 | 4,2123 |
| 6 ,7050 | 4,9173 |
| 7 ,6651 | 5,5824 |

Thus there is nothing difficult, but only the reducing of their numbers into the more known value of pounds, shillings, and pence, which may be performed by this Table.

Note that I have abreviated this Table to four places, considering this will be sufficient exactness, shewing the true value of one pound to the tenth part of a farthing; and it is so much more easie in many other propositions, which I have shewed to be wrought thereby. Also to make it more ready for you, I have set down the fractions from a farthing to a shilling in single farthings.

A Table of Decimal Fractions, shewing the proportion of any number of Shillings, Pence, or Farthings to a pound; the pound being divided into 10000 parts.

| Shil. | parts | d. | q. | parts. | d. | q. |
|---|---|---|---|---|---|---|
| 19 | 9500 | 11 | 3 | 0490 | 5 | 3 |
| 18 | 9000 | 11 | 2 | 0479 | 5 | 2 |
| 17 | 8500 | 11 | 1 | 0469 | 5 | 1 |
| 16 | 8000 | 11 | 0 | 0458 | 5 | 0 |
| 15 | 7500 | 10 | 3 | 0448 | 4 | 3 |
| 14 | 7000 | 10 | 2 | 0437 | 4 | 2 |
| 13 | 6500 | 10 | 1 | 0427 | 4 | 1 |
| 12 | 6000 | 10 | 0 | 0417 | 4 | 0 |
| 11 | 5500 | 9 | 3 | 0406 | 3 | 3 |
| 10 | 5000 | 9 | 2 | 0396 | 3 | 2 |
| 9 | 4500 | 9 | 1 | 0385 | 3 | 1 |
| 8 | 4000 | 9 | 0 | 0375 | 3 | 0 |
| 7 | 3500 | 8 | 3 | 0365 | 2 | 3 |
| 6 | 3000 | 8 | 2 | 0354 | 2 | 2 |
| 5 | 2500 | 8 | 1 | 0344 | 2 | 1 |
| 4 | 2000 | 8 | 0 | 0333 | 2 | 0 |
| 3 | 1500 | 7 | 3 | 0323 | 1 | 3 |
| 2 | 1000 | 7 | 2 | 0312 | 1 | 2 |
| 1 | 0500 | 7 | 1 | 0302 | 1 | 1 |
| | | 7 | 0 | 0292 | 1 | 0 |
| | | 6 | 3 | 0281 | 0 | 3 |
| | | 6 | 2 | 0271 | 0 | 2 |
| | | 6 | 1 | 0260 | 0 | 1 |
| | | 6 | 0 | 0250 | 0 | 0 |

Or if you like not these decimal Fracti-
ons, you may reduce the one pound into
pence, or farthings, and work as before.
Thus if in pence.

As 106 l. to 100 l. so 240 d. to 226 d. 106

Which reduced into shillings and pence,
is 18 shillings, 10. pence, 2 farthings, *ferè*.
Or if you reduce the 20 shillings into
farthings,

As 109 l to 100 l. so 960 q. to 905 q. 109

Which reduced, is as before 18 shillings,
10 pence, 2 farthings, *ferè*.
But in this if you proceed to make the
Table for many years, you must have some
respect to the fraction left; which is best by
adding a cypher or two to the Dividend,
and so they will come into tens or hundred
parts of a penny or farthing.
Now these Tables of Reversion being
added together, make up the Tables of pur-
chase. But I have not expressed these Ta-
bles of Reversion; because I have made
little use of them, only in making the o-
ther Tables. If any would make use of
them, or any part of them, they may easily
take them out of the Tables of purchase by
abstraction, as I shall shew in its place.
But because this way of calculating these
Tables, is very tedious, and subject to er-
ror, by reason of the many divisions and

additions, if there be not great care
there in; and one fault herein may
duce many: those who have skill in th
of Logarithms may thereby finde ou
true value of any thing for any numb
years, without respect had to the fe
years, which will be a shorter way, and
as a proof to the Tables, in case o
doubt. *As now for example.*

Let it be required to know the true
of a Lease of Land to continue seven
after the rate of six in the hundred.

First take the Logarithm of 100
the Logarithme of 100, and the rate
terest added together, which in th
ample is 106.

Secondly, multiply this Logarith
the number of years, which in this E
ple is 7.

Thirdly, divide 100 by the rate
Interest, which is 6, and it will prod
6667; then take the Logarithm t
and adde it to the former Logarith
product whereof will yield the Log
of the Arrearages with the said sum
that time.

Fourthly, finde out the true num
these Arrearages, & out of them subtr
proportional part of 100 before foun
cording to the rate of the Interest;

shall have the bare Arrearages for that proportional part.

Lastly, take the Logarithm of these last Arrearages, and subtract from them the Logarithm found by the multiplication of the years (in the second rule) so you shall have the Logarithm of the true value of these Arrearages in ready money; the true number whereof being found out, and reduced into pounds, shillings, and pence, may be used as any number in the Tables.

| | |
|---|---|
| *Logarithm of* 106 | 2,0253058 |
| *Logarithm of* 100 | 2,0000000 |
| *Rests by Substraction* | 0,0253058 |
| *Which multiplied by* 7 | 7 |
| *Comes to* | 0,1771406 |
| *Adde the Logar. of* 16,6667 | 1,2218287 |
| *Yields* | 1,3989693 |

*This is the Logarithm of*

25,0665

*From which* 16,6667 *substracted,*

*Rests* 08,3938

| | |
|---|---|
| *The Logarithm of* 8,3938 | 0,9239595 |
| *Log. by Multiplication of Years substracted* | 0,1771406 |
| *Rests* | 0,7468189 |

Which is the logarithm of 5,5824, wh
reduced, as in the little Table aforesai
5 pounds, 11 shillings, 7 pence, 3 farth
and somewhat more, which I hav
down in my Table, 5 pounds, 11 shill
8 pence, not acccounting any Fraction
der a peny.

---

Several Tables shewing the
value of one pound yearly R
to continue any number
years under 31, and from th
to 100 years, increasing by e
ry tenth Year, after the R
of 5, 6, 7, 8, 9, 10, and 1
the hundred, reckoning I
rest upon Interest.

## *Purchase of Annuities at* 5 per Centum.

| The number of years to be purchased. | l. | sh. | d. | The worth of one pound Annuity. | The number of years to be purchased. | l. | sh. | d. | The worth of one pound Annuity. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 19 | 00 | | 22 | 13 | 03 | 03 | |
| 2 | 1 | 17 | 01 | | 23 | 13 | 09 | 10 | |
| 3 | 2 | 14 | 05 | | 24 | 13 | 16 | 00 | |
| 4 | 3 | 10 | 11 | | 25 | 14 | 01 | 11 | |
| 5 | 4 | 06 | 07 | | 26 | 14 | 07 | 06 | |
| 6 | 5 | 01 | 06 | | 27 | 14 | 12 | 11 | |
| 7 | 5 | 15 | 09 | | 28 | 14 | 18 | 00 | |
| 8 | 6 | 09 | 03 | | 29 | 15 | 02 | 10 | |
| 9 | 7 | 02 | 02 | | 30 | 15 | 07 | 05 | |
| 10 | 7 | 14 | 03 | | 31 | 15 | 12 | 00 | |
| 11 | 8 | 06 | 02 | | | | | | |
| 12 | 8 | 17 | 03 | | *In tens of years.* | | | | |
| 13 | 9 | 07 | 11 | | | | | | |
| 14 | 9 | 18 | 00 | | 40 | 17 | 02 | 05 | |
| 15 | 10 | 07 | 08 | | 50 | 18 | 05 | 01 | |
| 16 | 0 | 16 | 09 | | 60 | 18 | 18 | 07 | |
| 17 | 11 | 05 | 05 | | 70 | 19 | 06 | 10 | |
| 18 | 11 | 13 | 10 | | 80 | 19 | 11 | 11 | |
| 19 | 12 | 01 | 09 | | 90 | 19 | 15 | 00 | |
| 20 | 12 | 09 | 03 | | 100 | 19 | 16 | 00 | |
| 21 | 12 | 16 | 05 | | | | | | |

## Purchase of Annuities at 6 per Centum.

| The number of years to be purchased. | li. sh. d. The worth of one pound annuity. |
|---|---|
| 1 | 0 18 10 |
| 2 | 1 16 08 |
| 3 | 2 13 06 |
| 4 | 3 09 04 |
| 5 | 4 04 03 |
| 6 | 4 18 04 |
| 7 | 5 11 08 |
| 8 | 6 04 02 |
| 9 | 6 16 00 |
| 10 | 7 07 02 |
| 11 | 7 17 09 |
| 12 | 8 07 02 |
| 13 | 8 17 01 |
| 14 | 9 05 11 |
| 15 | 9 14 03 |
| 16 | 10 02 01 |
| 17 | 10 09 07 |
| 18 | 10 16 07 |
| 19 | 11 03 02 |
| 20 | 11 09 05 |
| 21 | 11 15 03 |

| The number of years to be purchased. | li. sh. d. |
|---|---|
| 22 | 12 00 10 |
| 23 | 12 06 01 |
| 24 | 12 11 00 |
| 25 | 12 15 08 |
| 26 | 13 00 01 |
| 27 | 13 04 03 |
| 28 | 13 08 01 |
| 29 | 13 11 10 |
| 30 | 13 15 04 |
| 31 | 13 18 07 |
| *In tens of years* | |
| 40 | 15 00 08 |
| 50 | 15 14 06 |
| 60 | 16 03 03 |
| 70 | 16 07 08 |
| 80 | 16 10 02 |
| 90 | 16 11 07 |
| 100 | 16 13 04 |

## *Purchase of Annuities at* 7 per Centum.

| The number of years to be purchased. | li. sh. d. The worth of one pound Annuity. |
|---|---|
| 1 | 0 18 08 |
| 2 | 1 16 02 |
| 3 | 2 12 06 |
| 4 | 3 07 09 |
| 5 | 4 12 00 |
| 6 | 4 15 04 |
| 7 | 5 07 09 |
| 8 | 5 19 05 |
| 9 | 6 10 04 |
| 10 | 7 00 06 |
| 11 | 7 10 00 |
| 12 | 7 18 10 |
| 13 | 8 07 02 |
| 14 | 8 14 11 |
| 15 | 9 02 02 |
| 16 | 9 08 11 |
| 17 | 9 15 03 |
| 18 | 10 01 02 |
| 19 | 10 06 08 |
| 20 | 10 11 11 |
| 21 | 10 16 08 |

| The number of years to be purchased. | li. sh. d. The worth of one pound Annuity. |
|---|---|
| 22 | 11 01 3 |
| 23 | 11 05 5 |
| 24 | 11 09 5 |
| 25 | 11 13 1 |
| 26 | 11 16 6 |
| 27 | 11 19 6 |
| 28 | 12 02 9 |
| 29 | 12 05 7 |
| 30 | 12 08 2 |
| 31 | 12 10 8 |
| *In tens of year.* | |
| 40 | 13 06 7 |
| 50 | 13 15 8 |
| 60 | 14 00 9 |
| 70 | 14 03 2 |
| 80 | 14 04 5 |
| 90 | 14 05 1 |
| 100 | 14 05 5 |

## *Purchase of Annuities at 8 per Centum.*

| The number of years to be purchased. | li. | sh. | d. |
|---|---|---|---|
| 1 | 0 | 18 | 06 |
| 2 | 1 | 15 | 08 |
| 3 | 2 | 11 | 06 |
| 4 | 3 | 06 | 03 |
| 5 | 3 | 19 | 10 |
| 6 | 4 | 12 | 05 |
| 7 | 5 | 04 | 01 |
| 8 | 5 | 14 | 11 |
| 9 | 6 | 04 | 11 |
| 10 | 6 | 14 | 02 |
| 11 | 7 | 02 | 09 |
| 12 | 7 | 10 | 08 |
| 13 | 7 | 18 | 01 |
| 14 | 8 | 04 | 10 |
| 15 | 8 | 11 | 02 |
| 16 | 8 | 17 | 00 |
| 17 | 9 | 02 | 05 |
| 18 | 9 | 07 | 05 |
| 19 | 9 | 12 | 01 |
| 20 | 9 | 16 | 04 |
| 21 | 10 | 00 | 04 |

*The worth of one pound Annuity.*

| The number of years to be purchased. | li. | sh. | d. |
|---|---|---|---|
| 22 | 10 | 04 | 0 |
| 23 | 10 | 07 | 5 |
| 24 | 10 | 10 | 7 |
| 25 | 10 | 13 | 6 |
| 26 | 10 | 16 | 3 |
| 27 | 10 | 18 | 9 |
| 28 | 11 | 01 | 0 |
| 29 | 11 | 03 | 2 |
| 30 | 11 | 05 | 2 |
| 31 | 11 | 07 | 0 |
| *In tens of years.* | | | |
| 40 | 11 | 18 | 06 |
| 50 | 12 | 04 | 08 |
| 60 | 12 | 07 | 06 |
| 70 | 12 | 08 | 10 |
| 80 | 12 | 09 | 06 |
| 90 | 12 | 09 | 09 |
| 100 | 12 | 09 | 11 |

## *Purchase of Annuities at 9 per Centum.*

| *The number of years to be purchased.* | li. sh. d. *The worth of one pound Annuity.* |
|---|---|
| 1 | 0 18 04 |
| 2 | 1 15 02 |
| 3 | 2 10 08 |
| 4 | 3 04 09 |
| 5 | 3 17 09 |
| 6 | 4 09 09 |
| 7 | 5 00 08 |
| 8 | 5 10 08 |
| 9 | 5 19 11 |
| 10 | 6 08 04 |
| 11 | 6 16 01 |
| 12 | 7 03 02 |
| 13 | 7 09 09 |
| 14 | 7 15 09 |
| 15 | 8 01 03 |
| 16 | 8 06 03 |
| 17 | 8 10 11 |
| 18 | 8 15 01 |
| 19 | 8 19 00 |
| 20 | 9 02 07 |
| 21 | 9 05 01 |

| *The number of years to be purchased.* | li. sh. d. *The worth of one pound Annuity.* |
|---|---|
| 22 | 9 08 10 |
| 23 | 9 11 7 |
| 24 | 9 14 2 |
| 25 | 9 16 6 |
| 26 | 9 18 7 |
| 27 | 10 00 6 |
| 28 | 10 02 4 |
| 29 | 10 04 0 |
| 30 | 10 05 6 |
| 31 | 10 06 10 |
| *In tens of years* | |
| 40 | 10 15 02 |
| 50 | 11 01 03 |
| 60 | 11 06 10 |
| 70 | 11 10 08 |
| 80 | 11 12 00 |
| 90 | 11 12 01 |
| 100 | 11 12 02 |

## *Purchase of Annuities at* 10 per Centum.

| *The number of years to be purchased.* | *The worth of one pound Annuity.* l. | sh. | d. |
|---|---|---|---|
| 1 | 0 | 18 | 02 |
| 2 | 1 | 14 | 08 |
| 3 | 2 | 09 | 08 |
| 4 | 3 | 03 | 04 |
| 5 | 3 | 15 | 09 |
| 6 | 4 | 07 | 01 |
| 7 | 4 | 17 | 04 |
| 8 | 5 | 06 | 08 |
| 9 | 5 | 15 | 02 |
| 10 | 6 | 02 | 10 |
| 11 | 6 | 09 | 09 |
| 12 | 6 | 16 | 03 |
| 13 | 7 | 02 | 00 |
| 14 | 7 | 07 | 04 |
| 15 | 7 | 12 | 01 |
| 16 | 7 | 16 | 05 |
| 17 | 8 | 00 | 05 |
| 18 | 8 | 04 | 00 |
| 19 | 8 | 07 | 03 |
| 20 | 8 | 10 | 03 |
| 21 | 8 | 12 | 11 |

| *The number of years to be purchased.* | l. | sh. | d. |
|---|---|---|---|
| 22 | 8 | 15 | 5 |
| 23 | 8 | 17 | 7 |
| 24 | 8 | 19 | 8 |
| 25 | 9 | 01 | 0 |
| 26 | 9 | 03 | 2 |
| 27 | 9 | 04 | 5 |
| 28 | 9 | 06 | 1 |
| 29 | 9 | 07 | 4 |
| 30 | 9 | 08 | 6 |
| 31 | 9 | 09 | 7 |
| *In tens of years* | | | |
| 40 | 9 | 15 | 07 |
| 50 | 9 | 18 | 04 |
| 60 | 9 | 19 | 04 |
| 70 | 9 | 19 | 09 |
| 80 | 9 | 19 | 11 |
| 90 | 9 | 19 | 11 |
| 100 | 10 | 00 | 00 |

## Purchase of Annuities at 12 per Centum

| The number of years to be purchased. | l. | sh. | d. |
|---|---|---|---|
| 1 | 0 | 17 | 10 |
| 2 | 1 | 13 | 10 |
| 3 | 2 | 08 | 00 |
| 4 | 3 | 00 | 09 |
| 5 | 3 | 12 | 01 |
| 6 | 4 | 02 | 03 |
| 7 | 4 | 11 | 03 |
| 8 | 4 | 19 | 04 |
| 9 | 5 | 06 | 06 |
| 10 | 5 | 13 | 00 |
| 11 | 5 | 18 | 09 |
| 12 | 6 | 03 | 10 |
| 13 | 6 | 08 | 05 |
| 14 | 6 | 12 | 06 |
| 15 | 6 | 16 | 02 |
| 16 | 6 | 19 | 05 |
| 17 | 7 | 02 | 04 |
| 18 | 7 | 04 | 11 |
| 19 | 7 | 07 | 03 |
| 20 | 7 | 09 | 04 |
| 21 | 7 | 11 | 02 |

*The worth of one pound Annuity.*

| The number of years to be purchased. | l. | sh. | d. |
|---|---|---|---|
| 22 | 7 | 12 | 10 |
| 23 | 7 | 14 | 04 |
| 24 | 7 | 15 | 08 |
| 25 | 7 | 16 | 10 |
| 26 | 7 | 17 | 10 |
| 27 | 7 | 18 | 10 |
| 28 | 7 | 19 | 08 |
| 29 | 8 | 00 | 05 |
| 30 | 8 | 01 | 01 |
| 31 | 8 | 01 | 08 |
| *In tens of years.* | | | |
| 40 | 8 | 04 | 10 |
| 50 | 8 | 06 | 00 |
| 61 | 8 | 06 | 06 |
| 70 | 8 | 06 | 07 |
| 80 | 8 | 06 | 08 |
| 90 | | | |
| 100 | | | |

*The worth of one pound Annuity.*

## The use of these Tables.

### *First, to know the price of any Annuity, to continue any number of Years.*

HAving, according to the former observations, considered the nature of the thing you intend to buy, and so found out after what profit you may fitly lay out your money upon it, whether at 5, 6, 7, 8, 9, or 10 in the hundred, according to the certainty or uncertainty of the thing: then to cast up what the value of the purchase will be, according to that rate, you must do thus.

First, finde the rate of the gain you would have for your money at the head of the Table, and finde the years of the continuance of the Lease or Annuity on the side of the Table, and in that line under the foresaid rate, you shall finde what the purchase of one pound a year, to continue the said number of years is worth; by the which, with a little addition, you may find the true value of any other prized yearly income; whether it be little or great.

*As for Example.*

What is a Lease of ten pounds yearly value, to continue 21 years, worth in ready money

money, after the rate of six in the hundred Interest.

By that Table you see that one pound a year to continue 21 years, after the said rate of six for the hundred, is worth 11 pound, 15 shillings, 3 pence. So then ten pound a year is worth ten times as much which may be thus easily found.

| | | | |
|---|---|---|---|
| *Ten times* 11 *pound is* | 110*l.* | 00*s.* | 00*d.* |
| *Ten times* 15 *shillings is* | 007 | 10 | 00 |
| *Ten times* 3 *pence is* | 000 | 02 | 06 |
| *In all* | 117 | 12 | 06 |

Which is the value of the thing desired.

The like you may do by any other prized Annuity for any other time, and at any other rate of profit for your money, as the nature of the thing requires.

Thus the Lease of an house for 21 years, being reckoned by the Table of 10 pound *per Cent.* for one pound or 20 shillings Annuity is worth 8 pound, 12 shillings, 11 pence; therefore 10 pound *per Annum* is worth ten times as much, which you may reckon as before,

| | | | |
|---|---|---|---|
| *Ten times* 8 *pound is* | 80 | 0 | 0 |
| *Ten times* 12 *shillings is* | 06 | 0 | 0 |
| *Ten times* 11 *pence is* | 00 | 9 | 2 |
| *In all* | 86 | 9 | 2 |

Which

Which is the value of the ſaid Leaſe:

But becauſe men uſually reckon bargains of this nature by the yearly revenue of the thing, and uſe to ſay, ſuch a thing is worth ſo many years purchaſe; this may alſo plainly and truly be done by the foreſaid Tables: and though this way cannot be ſo exact as the other, yet for cuſtome ſake take it thus.

The Tables are exactly caſt up for one pound yearly revenue, at each of the ſaid rates, ſo that in the ſums ſet down therein, for every pound or 20 ſhillings you muſt reckon one years purchaſe; for ten ſhillings, half a years purchaſe, for five ſhillings, a quarter of a years purchaſe; and ſo for any ſumme under, proportionally.

But becauſe *I* would make things as plain as I could to every one, I have here reduced ſome of the moſt neceſſary Tables aforeſaid into years, and parts of a year, dividing the year into 12 parts, or months, which will be exact enough in moſt bargains.

## Tables of purchasing.

This Table is fit to be used only in the purchase of Free-Hold Lands,

| At 5 per Cent. year to be purchas. | the value in year. | moneth. | At 6 per Cent. year to be purchas. | the value in year. | moneth. |
|---|---|---|---|---|---|
| 1 | 0 | 11 | 1 | 0 | 11 |
| 2 | 1 | 10 | 2 | 1 | 10 |
| 3 | 2 | 9 | 3 | 2 | 8 |
| 4 | 3 | 7 | 4 | 3 | 6 |
| 5 | 4 | 4 | 5 | 4 | 3 |
| 6 | 5 | 1 | 6 | 4 | 11 |
| 7 | 5 | 9 | 7 | 5 | 7 |
| 8 | 6 | 6 | 8 | 6 | 2 |
| 9 | 7 | 1 | 9 | 6 | 10 |
| 10 | 7 | 9 | 10 | 7 | 4 |
| 11 | 8 | 4 | 11 | 7 | 11 |
| 13 | 9 | 5 | 13 | 8 | 10 |
| 15 | 10 | 5 | 15 | 9 | 9 |
| 17 | 11 | 3 | 17 | 10 | 6 |
| 19 | 12 | 1 | 19 | 11 | 2 |
| 21 | 12 | 10 | 21 | 11 | 9 |
| 23 | 13 | 6 | 23 | 12 | 4 |
| 25 | 14 | 1 | 25 | 12 | 9 |
| 27 | 14 | 8 | 27 | 13 | 3 |
| 29 | 15 | 2 | 29 | 13 | 7 |
| 31 | 15 | 7 | 31 | 13 | 11 |
| 41 | 17 | 1 | 41 | 15 | 1 |
| 51 | 18 | 3 | 51 | 15 | 9 |
| 61 | 18 | 11 | 61 | 16 | 2 |
| 71 | 19 | 4 | 71 | 16 | 5 |
| 81 | 19 | 7 | 81 | 16 | 6 |
| 91 | 19 | 9 | 91 | 16 | 7 |
| Fee simp. | 20 | 0 | Fee simp. | 16 | 8 |

This Table maybe used in the purchase of Coppi-Hold-Lands, or in Leases of Land.

At 8 per Cent.

| year to be purchas. | the value in year. | moneth |
|---|---|---|
| 1 | 0 | 11 |
| 2 | 1 | 9 |
| 3 | 2 | 7 |
| 4 | 3 | 4 |
| 5 | 4 | 0 |
| 6 | 4 | 7 |
| 7 | 5 | 2 |
| 8 | 5 | 9 |
| 9 | 6 | 3 |
| 10 | 6 | 9 |
| 11 | 7 | 2 |
| 13 | 7 | 11 |
| 15 | 8 | 7 |
| 17 | 9 | 1 |
| 19 | 9 | 7 |
| 21 | 10 | 0 |
| 23 | 10 | 4 |
| 25 | 10 | 8 |
| 27 | 10 | 11 |
| 29 | 11 | 2 |
| 31 | 1 | 4 |
| 41 | 11 | 11 |
| 51 | 12 | 3 |
| 61 | 12 | 4 |
| 71 | 12 | 5 |
| 81 | 12 | 6 |
| 91 | 12 | 6 |
| Fee simp | 12 | 6 |

*This Table may be used in the purchases of Leases of Land, and of some Houses.*

At 10 per Cent.

| year to be purchas | the value year. | moneth |
|---|---|---|
| 1 | 0 | 1 |
| 2 | 1 | |
| 3 | 2 | |
| 4 | 3 | |
| 5 | 3 | |
| 6 | 4 | |
| 7 | 4 | 1 |
| 8 | 5 | |
| 9 | 5 | |
| 10 | 6 | |
| 11 | 6 | |
| 13 | 7 | |
| 15 | 7 | |
| 17 | 8 | |
| 19 | 8 | |
| 21 | 8 | 1 |
| 23 | 9 | |
| 25 | 9 | |
| 27 | 9 | |
| 29 | 9 | |
| 31 | 9 | |
| 41 | 9 | 1 |
| 51 | 9 | 1 |
| 61 | 10 | |
| 71 | 10 | |
| 81 | 10 | |
| 91 | 10 | |
| Fee simp | 10 | |

*This Table is fittest to be used in the purchasing of Leases of Houses.*

Thus the former queſtion being demanded, you ſhall finde by theſe Tables, that a Leaſe of 21 years reckoned after the rate of 6 *per Cent.* is worth 11 years and nine moneths, or 3 quarters of a years purchaſe. So that the yearly rent of the thing being 10 *l.* the value will be thus found.

| | | | |
|---|---|---|---|
| *Eleven times* 10 *l. is* | 110*l.* | 00 | 00 |
| 3 *quarters of* 10 *l. is* | 7 | 10 | 00 |
| *In all* | 117 | 10 | 00 |

And this is very near the former price, and though not altogether ſo exact, yet will ſerve in moſt bargains of this nature.

Though either of theſe ways be exact enough for moſt men, and moſt queſtions of this nature; yet if any deſire to be more exact, they will finde ſome trouble, when either the Annuity or the numbers in theſe Tables, do not make even ponnds, or at leaſt common and known parts of a pound. In this caſe therefore, if you will be curious to know the preciſe value, you muſt have recourſe to the table of Decimal Fractions, *page* 26. and thereby reduce both the price of the Annuity, and the price of the purchaſe thereof ſet down in theſe tables, into thoſe fractions, and ſo multiplying one by the other, and reducing the product there-

of

of again by the said Decimal Table, yo
shall have the true value or the purcha
exactly.

Thus, let the Annuity be worth 55 pound
12 shillings, 6 pence, and you desire t
know the value thereof for 21 years aft
the rate of six *per Centum*.

This Annuity reduced by the Decim
Table, will be 55 l. 6250 p. and the Tab
shews the worth of one pound for 21 yea
is 11 pound, 15 shillings, 3 pence, whi
reduced likewise, is 11 l. 7625 p. now the
two must be multiplied each by othe
to which purpose set these two numbe
thus,

11. 7625
55. 6250

| | |
|---|---|
| 588 | 1250 |
| 2352 | 50 |
| 70575 | 0 |
| 588125 | |
| 521785 | |

654,2890-6257

All the difficulty now is in finding out th
value of this product. Therefore obser
first, that all the figures which are beyo
the pounds, or Integers in the *Multiplic*
to-

tor, are separated by the point (.) to distinguish them; and under this point there must be a perpendicular line drawn to cut off all the figures under them as useless.

Then from this line account four figures more in the product, according to the places of the decimal Table) and there make a prick at 4. so the product appears to be 654 l. 2890. that is, 654 pound, 5 shillings, 9 pence, 2 farthings.

Or else to be more sure, cast it up as near as you can the former way; and so you shall see whether 2, 3, or 4 of the first figures of the product stand for pounds, and the four next take for the Fractions.

Some yet more curious, would have these Tables calculated, not only to shew the value of purchases in whole years (as the former Tables do) but for every three months. And though the difference will not be great, yet there is some reason for it, for the Rent of Land or Houses being paid every quarter or half year, the buyer hath the benefit of the first quarters rent, for three quarters of a year; of the second quarters rent, for half a year, and of the third quarters rent, for a quarter of a year, all which the Seller loseth, in selling by the former Tables.

Therefore, as I have for the use of the common sort of men, made the former Tables

bles as plain as I could, not having respe
to this exactneſs, becauſe no man is ti
to make his bargain exactly according
theſe Rules, but only to learn hereby
what rate of profit he buyes or ſells: ſo
the ſatisfaction of thoſe who are more ski
ful, I have calculated theſe two Table
ſhewing what one pound yearly rent to
paid quarterly is worth, any term of ye
or quarters under 21 years, the one at 6 p
*Cent.* the other at 8 *per Cent.* theſe two bei
the moſt neceſſary in this caſe, and by whi
you may have ſome gueſs of the oth
rates.

---

The

The value of the purchase of Annuities which are to be paid every 3 months at 6 per Cent.

| years | quar. | y. par. of li. parts. | years | quar. | y. par. of li. parts | years | quar. | y. par. of li. parts |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0,2463 | 7 | 1 | 5,8439 | 14 | 1 | 9,5332 |
| | 2 | 0,4890 | | 2 | 6,0039 | | 2 | 9,6387 |
| | 3 | 0,7280 | | 3 | 6,1614 | | 3 | 9,7425 |
| 1 | 0 | 0,9636 | 8 | 0 | 6,3167 | 15 | 0 | 9,8448 |
| | 1 | 1,1956 | | 1 | 6,4696 | | 1 | 9,9456 |
| | 2 | 1,4243 | | 2 | 6,6203 | | 2 | 10,0449 |
| | 3 | 1,6495 | | 3 | 6,7688 | | 3 | 10,1428 |
| 2 | 0 | 1,8715 | 9 | 0 | 6,9150 | 16 | 0 | 10,2392 |
| | 1 | 2,0901 | | 1 | 7,0592 | | 1 | 10,3342 |
| | 2 | 2,3055 | | 2 | 7,2011 | | 2 | 10,4277 |
| | 3 | 2,5177 | | 3 | 7,3410 | | 3 | 10,5199 |
| 3 | 0 | 2,7268 | 10 | 0 | 7,4788 | 17 | 0 | 10,6108 |
| | 1 | 2,9328 | | 1 | 7,6146 | | 1 | 10,7002 |
| | 2 | 3,1358 | | 2 | 7,7484 | | 2 | 10,7884 |
| | 3 | 3,3358 | | 3 | 7,8802 | | 3 | 10,8753 |
| 4 | 0 | 3,5328 | 11 | 0 | 8,0100 | 18 | 0 | 10,9608 |
| | 1 | 3,7269 | | 1 | 8,1379 | | 1 | 11,0452 |
| | 2 | 3,9181 | | 2 | 8,2640 | | 2 | 11,1282 |
| | 3 | 4,1065 | | 3 | 8,3881 | | 3 | 11,2100 |
| 5 | 0 | 4,2921 | 12 | 0 | 8,5105 | 19 | 0 | 11,2907 |
| | 1 | 4,4750 | | 1 | 8,6310 | | 1 | 11,3701 |
| | 2 | 4,6551 | | 2 | 8,7497 | | 2 | 11,4484 |
| | 3 | 4,8327 | | 3 | 8,8667 | | 3 | 11,5255 |
| 6 | 0 | 5,0075 | 13 | 0 | 8,9820 | 20 | 0 | 11,6014 |
| | 1 | 5,1798 | | 1 | 9,0955 | | 1 | 11,6763 |
| | 2 | 5,3496 | | 2 | 9,2074 | | 2 | 11,7500 |
| | 3 | 5,5168 | | 3 | 9,3177 | | 3 | 11,8227 |
| 7 | 0 | 5,6816 | 14 | 0 | 9,4262 | 21 | 0 | 11,8942 |

The value of the purchase of Annuities wh
are to be paid every 3 months at 8 per Ce

| years | quar | y. par. of li. parts. | years. | quar. | y par. of li. parts | years | quar. | y. par. of li. parts |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0,2452 | 7 | 1 | 5,5031 | 14 | 1 | 8,357 |
| | 2 | 0,4858 | | 2 | 5,6435 | | 2 | 8,65 |
| | 3 | 0,7218 | | 3 | 5,7812 | | 3 | 8,73 |
| 1 | 0 | 0,9532 | 8 | 0 | 5 9163 | 15 | 0 | 8,81 |
| | 1 | 1,1796 | | 1 | 6,0487 | | 1 | 8,88 |
| | 2 | 1,4031 | | 2 | 6 1787 | | 2 | 8,96 |
| | 3 | 1,6216 | | 3 | 6,3062 | | 3 | 9,03 |
| 2 | 0 | 1,8359 | 9 | 0 | 6,4313 | 16 | 0 | 9,11 |
| | 1 | 2,0461 | | 1 | 6,5539 | | 1 | 9,18 |
| | 2 | 2,2524 | | 2 | 6,6743 | | 2 | 9,25 |
| | 3 | 2,4547 | | 3 | 6 7923 | | 3 | 9,33 |
| 3 | 0 | 2,6531 | 10 | 0 | 6,9081 | 17 | 0 | 9,39 |
| | 1 | 2,8478 | | 1 | 7,0216 | | 1 | 9,45 |
| | 2 | 3,0388 | | 2 | 7,1334 | | 2 | 9,52 |
| | 3 | 3,2261 | | 3 | 7,2425 | | 3 | 9,58 |
| 4 | 0 | 3,4099 | 11 | 0 | 7 3492 | 18 | 0 | 9,64 |
| | 1 | 3,5901 | | 1 | 7,4546 | | 1 | 9,7 |
| | 2 | 3,7669 | | 2 | 7,5580 | | 2 | 9 77 |
| | 3 | 3,9404 | | 3 | 7,6502 | | 3 | 9,83 |
| 5 | 0 | 4,1105 | 12 | 0 | 7,7585 | 19 | 0 | 9 89 |
| | 1 | 4,2775 | | 1 | 7,8584 | | 1 | 9,96 |
| | 2 | 4,4412 | | 2 | 7,9514 | | 2 | 9,99 |
| | 3 | 4,6018 | | 3 | 8,0451 | | 3 | 10,05 |
| 6 | 0 | 4,7593 | 13 | 0 | 8,1371 | 20 | 0 | 10,10 |
| | 1 | 4,9139 | | 1 | 8 2272 | | 1 | 10,16 |
| | 2 | 5,0654 | | 2 | 8,3157 | | 2 | 10,21 |
| | 3 | 5,2127 | | 3 | 8,4025 | | 3 | 10,26 |
| 7 | 0 | 5,3600 | 14 | 0 | 8,4875 | 21 | 0 | 10,31 |

The use of these Tables is the same with the former, only this for the more ready and exact use is cast up in pounds, and decimal parts of pounds, which you may reduce by the decimal Table, *page* 26.

*For Example.*

If you would know the value of the foresaid Lease of ten pounds a year, to continue twenty one years, and to be received quarterly, after the rate of 6 *l. per Cent.* you shall finde by this Table that,

| | *li. parts* |
|---|---|
| One pound yearly for 21 years is worth | 11 8,42 |
| Thus multiplied by 10, the rent of the purchase being 10 *li. per Annum*, makes | 118 9420 |
| Which reduced by the decimal Table is | *li. sh. d.* 118 18 10 |
| Where as the price by the former Table, page 32 was found to be | 117 12 06 |
| The difference being | 001 06 04 |

There is another very necessary question easily resolved by these Tables, and that is, when any one doth ask of you such a summe of money, or so many years purchase for a parcel of Land, Lease, or House, to know what profit he allows you for your money.

As now, Suppose you may have a Le
of an house for 21 years, for 8 years,
an half purchase, what profit doth y
money yield you?

For this purpose; first, you must fi
the number of years in the sides of the T
bles, and look in the several Tables u
you finde the same summe demanded, or
neerest you can finde to it, then at the h
of that Table, you shall find the rate of
profit which your money brings you in.

Thus, if according to this example,
look over all the Tables, for eight years
an half purchase, that is 8 pounds, 10
lings in the line of 21 years, you shall
in the Table of 10 *per Centum*, at 21 y
8 pounds, 12 shillings, 11 pence; whic
the neerest summe that is to be found i
the Tables; and at the head of this Ta
you shall finde, your money brings yo
by this Bargain 10 in the hundred profi

*All this which hath been spoken of purch
of Leases, you may apply to Fines fo
abatement of a greater or lesser part o
Rent of any thing.*

Thus, if a Tenant would have 5, 10,
20 pounds abated in his yearly Rent,
may be reckoned worth so many years p
chase as the Tables shew for.

But now suppose a Land-Lord demand an 100 pound fine for the Lease of an House for 21 years, besides the yearly Rent. I would know how much yearly Rent this 100 pound doth countervalue after the rate of 10 in the hundred.

In this case, you must take the summe set down in the Table, which for this example is 8 pounds, 12 shillings, 11 pence, and finde how many times it is contained in an 100 pound; for so many pounds of yearly Rent it countervalues.

Now this you may do by reducing the said 8 pound, 12 shillings, 11 pence into pence; so it is 2075 pence. Likewise in an 100 pound are 2400); this divided by the foresaid 2075, yields 11 in the quotient, and there remains $\frac{1175}{2075}$ which is somewhat more then an half; so that is above 11 pound, 10 shillings.

If you will know this more exactly, multiply 1175 parts of a pound by 20, so you have 23500, which divided by the former number 2075, yields 11 shillings in the quotient, and 675 remaining.

Again, if you multiply this 675 by 12, yields 8100, which divided by 2075, yields almost 4 pence, wanting only half a farthing.

So that this 100 pound fine should conn-

tervalue according to this rate, 11 pound
11 ſhillings 4 pence *ferè* of yearly Rent.

Or you may have recourſe to the Tab
of Reduction, *page* 26. and thereby red
the ſumme into tenths of pounds.

Thus the ſaid 8 pounds, 12 ſhillings,
pence reduced, is 8 pound, 6458. with
divide the price of your Fine, an
pound, adding ſome cyphers thereto,
need ſhall be. So in this Example, the F
being 100 pound, you ſhall find, 11 po
566. that is, 11 pounds, 11 ſhillings, 4 p
*ferè*; and ſo much yearly Rent doth an
pound Fine countervalue at the rate of
pound in the hundred for 21 years.

Laſtly, you may ſee by the latter en
the Tables, what rate of profit your m
yields you, buying any thing out-righ
any number of years purchaſe. Thus, a
years purchaſe, your money yields
10 *per Centum* profit, as you may see by
Table. At 12 years and an half purc
for the Fee-ſimple, your money yield
8 *per Centum* profit, as you may ſee by
end of the Table of 8 *per Centum*. A
20 years purchaſe your money yields
but 5 *per Centum* profit.

And if you would know this more e
ly, take this Rule, divide an 100 by
number of years, the quotient will ſhew

the Rate of the profit you have for your money.

Thus 100 divided by 12 years, the price of the purchase of the Fee-simple, yields 8, 3333, or 8 pound, 6 shillings 8 pence for the rate of the profit.

So 100 divided by 18 years, yields 5555 which is 5 pound, 11 shillings, 11 pence for the rate of your profit.

Or else if you divide an 100 by the rate of the profit you look to have, in the buying of your purchase, you may see how many years purchase you may fully give for it.

Thus, divide an 100 by 6, if that be the rate of the profit you desire in your purchase, and you shall finde 16 years and two thirds of a year, so many years purchase you may give, and yet make 6 in the hundred profit of your money.

By this a man having bought Land or Houses at any price, he may know which of the foresaid Tables he must use in the letting Leases thereof again, that he save or get by the Bargain, as he shall think fit; or at least may know whether he gets or loses by the Leases he lets.

## *Of Reversions.*

THus much for buying any thing which is presently to be possessed.

There are other kind of purchases in Reversion, when the thing yields no profit the present, till some considerable term years be passed.

And in these bargains you must also look first into the quality of the thing, and the certainty thereof; and accordingly find out the value thereof, at a greater or less rate of Interest.

And to this purpose I have set down the tables of Reversions to the several rates Interest aforesaid; for though they are included in the other, yet I thought it somewhat more plain, thus to extract them for your more ready use. And I have contracted them into as small a compass as I can yet so as they will be plain enough, considering what hath been said before, they being to be used after the same manner.

These Tables shew how much one pound or 20 s. to be paid or received, any number of years hereafter, is worth at the present time in ready money, after the several rates of 5, 6, 8, 10, and 12, *per Cent.*

Tables

Tables of Reversions.

| | V per C. | | VI per C. | | VIII per C. | | X per C. | | XII per C. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | lh. | d. | lh. | d. | lh. | d. | lh. | d. | lh. | d. |
| 1 | 19 | 00 | 18 | 10 | 18 | 06 | 18 | 02 | 17 | 10 |
| 2 | 18 | 02 | 17 | 09 | 17 | 01 | 16 | 06 | 16 | 00 |
| 3 | 17 | 03 | 16 | 09 | 15 | 10 | 15 | 00 | 14 | 02 |
| 4 | 16 | 06 | 15 | 10 | 14 | 08 | 13 | 08 | 12 | 09 |
| 5 | 15 | 08 | 14 | 11 | 13 | 07 | 12 | 05 | 11 | 04 |
| 6 | 14 | 11 | 14 | 01 | 12 | 07 | 11 | 04 | 10 | 02 |
| 7 | 14 | 03 | 13 | 04 | 11 | 08 | 10 | 03 | 9 | 00 |
| 8 | 13 | 06 | 12 | 06 | 10 | 09 | 9 | 04 | 8 | 01 |
| 9 | 12 | 11 | 11 | 10 | 10 | 00 | 8 | 06 | 7 | 02 |
| 10 | 12 | 01 | 11 | 02 | 9 | 04 | 7 | 08 | 6 | 06 |
| 11 | 11 | 11 | 10 | 07 | 8 | 06 | 6 | 11 | 5 | 09 |
| 12 | 11 | 01 | 9 | 11 | 7 | 11 | 6 | 06 | 5 | 01 |
| 13 | 10 | 08 | 9 | 05 | 7 | 04 | 5 | 09 | 4 | 07 |
| 14 | 10 | 01 | 8 | 10 | 6 | 09 | 5 | 04 | 4 | 01 |
| 15 | 9 | 08 | 8 | 04 | 6 | 03 | 4 | 09 | 3 | 08 |
| 16 | 9 | 01 | 7 | 10 | 5 | 10 | 4 | 04 | 3 | 03 |
| 17 | 8 | 09 | 7 | 06 | 5 | 04 | 4 | 00 | 2 | 11 |
| 18 | 8 | 04 | 7 | 00 | 5 | 00 | 3 | 07 | 2 | 07 |
| 19 | 7 | 11 | 6 | 07 | 4 | 07 | 3 | 03 | 2 | 04 |
| 20 | 7 | 06 | 6 | 03 | 4 | 03 | 3 | 00 | 2 | 01 |
| 21 | 7 | 02 | 5 | 10 | 3 | 11 | 2 | 09 | 1 | 10 |
| 22 | 6 | 10 | 5 | 07 | 3 | 08 | 2 | 06 | 1 | 08 |
| 23 | 6 | 07 | 5 | 03 | 3 | 04 | 2 | 02 | 1 | 06 |
| 24 | 6 | 02 | 4 | 11 | 3 | 01 | 2 | 00 | 1 | 04 |
| 25 | 5 | 11 | 4 | 08 | 2 | 11 | 1 | 10 | 1 | 02 |
| 26 | 5 | 07 | 4 | 05 | 2 | 08 | 1 | 08 | 1 | 00 |
| 27 | 5 | 05 | 4 | 02 | 2 | 06 | 1 | 06 | 0 | 11 |
| 28 | 5 | 01 | 3 | 10 | 2 | 04 | 1 | 04 | 0 | 10 |
| 29 | 4 | 10 | 3 | 09 | 2 | 02 | 1 | 03 | 0 | 09 |
| 30 | 4 | 08 | 3 | 06 | 2 | 00 | 1 | 01 | 0 | 08 |
| 31 | 4 | 06 | 3 | 03 | 1 | 10 | 1 | 01 | 0 | 07 |

Now becauſe theſe Tables ſhew the v
lue of a reverſion but to 31 years (thou
that may be enough for moſt occaſions)
if you pleaſe to know the worth of a re
verſion for any longer time, this briefe a
more general Table may give you ſome
ſight therein.

| The increaſe of 20 ſhill. principal. | A Table of Reverſions. 5 \| 6 \| 8 \| 10 \| 12. Rate of the Intereſt. Number of Years. | | | | | The decreaſe of twenty ſhillings. |
|---|---|---|---|---|---|---|
| Pounds. | | | | | | l. d. q. |
| 2 | 15 | 12 | 9 | 7 | 6 | 10 0 0 |
| 4 | 30 | 24 | 18 | 15 | 12 | 5 0 0 |
| 8 | 45 | 36 | 27 | 22 | 18 | 2 6 0 |
| 16 | 60 | 48 | 36 | 30 | 24 | 1 3 0 |
| 32 | 75 | 60 | 45 | 37 | 30 | 0 7 2 |
| 64 | 90 | 72 | 54 | 45 | 36 | 0 3 3 |
| 128 | 105 | 84 | 63 | 52 | 42 | 0 2 0 |
| 256 | 120 | 96 | 72 | 60 | 48 | 0 1 0 |
| | | 108 | 81 | 67 | 54 | 0 0 2 |

Note, you cannot expect this Table so exact as a particular Table; and when you cannot finde your just number of years, you must guess at the increase or decrease by proportion.

This Table is so plain, that it needs no declaration; yet lest any should not understand it, take this direction in the use thereof.

First, finde out your rate of Interest desired, at the top of the Table, then look down in that Column, till you finde your number of years desired (or the nearest thereto) and against this number of years, in that same line upon the right hand of the Table you have the decrease of one pound, or the worth of one pound, or 20 s. in reversion after the said number of years.

And though it make little for our present purpose, yet because it may so fitly be expressed in this Table, I have on the left hand side of the Table expressed the value and increase of one pound in the like number of years.

*Example.*

Thus in the middle column of the Table, which is cast up at the rate of 8 *l. per Cent.* you shall finde in the last line, that in the space of 90 years, the reversion of one pound is worth but a farthing, and the in-

creaſe of one pound comes to 1024 l.

*Now the uſe of theſe Tables are Thus.*

WHen you would know the worth of any thing in reverſion, firſt you muſt conſider the nature of the thing, whether it be an Houſe or Land, and whether you are to buy a Leaſe, or Fee-ſimple thereof, and ſo accordingly by the former rules, finde out what it is worth in ready money, as if it were free from all ingagements.

Secondly, according to the nature of the thing, ſo you may look to have more or leſs allowance for your money, and ſo having conſidered what allowance is fit for the purchaſe, finde that out at the top of the Table, and in that Column, at, or against the number of years for which the thing is engaged, you ſhall finde the worth of one pound, or 20 s. in reverſion for the ſame time.

Thirdly, look how many pounds the purchaſe would be worth in ready money, ſo many times you muſt take the ſaid reverſion of one pound, and either by addition or multiplication bring it into one ſumme, and ſo you have the true value of the reverſion.

*For example.*

A parcel of Land of one hundred pounds yearly Rent, being worth 20 years purchase is worth in ready money 2000l.

Now suppose this Land is morgaged, or Leased out for 21 years, what is the reversion thereof at the end of 21 years, worth in ready money? Here first you see the Land if it were free from ingagements were worth 2000 l. ready money.

Secondly, because it is a reversion of Land, and so certain, it is fit the allowance should be but after the rate of 5 l. *per Cent.* according as the purchase thereof is worth. Now the first Table of Reversions shew, that one pound, at the end of one and twenty years is worth but 7 s. 2 d. ready money at the said rate of 5 l. *per Cent.*

Thirdly, this 7 s. 2 d. therefore must be added or multiplied 2000 times according to the full value of the purchase which you may easily do by the Table of accounts following, at the latter end of the Book.

| As thus, | *l. sh. d.* |
|---|---|
| 2000 *times* 7 *s. is* | 700 00 0 |
| 2000 *times* 2 *d. is* | 016 13 4 |
| *In all* | 716 13 4 |

And this is the worth of the said Reuersion.

If it be the Reversion of a lease of a house

or Land, you must do likewise, only find the worth of the reversion of one pound under the Title of 6 *l.* 8*l.* or 10*l.* *per Cen* as the nature of the thing requires.

For your better instructions herein, yo may make use of these following rule which are grounded upon the first Table of purchases, yet come much to one reckoning, and perhaps may be somewhat mo plain and easie.

I.

*If you are to purchase the Reversion of a pi of Land.*

First, consider how many years purcha the Land is worth, if it were presently n possessed, which is about 20 years purchas for which account 20 pound.

Then look in the Table under the R of 6 in the hundred, (which is the R fittest for Leases of Land) how much years, for which it is engaged, comes to.

Now substract this out of the other, a the remaining summe will give you the va lue of the purchase, accounting the pou for years, and the shillings and pence parts of a year.

Thus for Example, any piece of L being worth 20 years purchase, being

gaged by Leaſe, or otherwiſe, for 21 years the reverſion will be worth eight years and a quarters purchaſe.

For, ſuppoſe the rent to be one pound or 20 s. a year.

| | |
|---|---|
| *The full value of it is* | 20*l.* 00*s.* 00*d.* |
| *The Leaſe of* 21 *years at ſix in the hundred, comes to* | 11 15 03 |
| *Which ſubſtracted, ſhews* | 08 04 09 |

That is, eight years, and almoſt a quarter of a years purchaſe, and ſo you may reckon it up for any other yearly Rent.

II.

*The like courſe you muſt take in purchaſing the Reverſion of Houſes.*

Firſt, account their full value, and then ſubſtract the worth of the years for which they are ingaged, at rates according to their goodneſs.

Thus reckoning a good new built houſe to be worth 12 years purchaſe, the reverſion thereof after 21 years will be worth about three years, and a quarter, and half a quarters purchaſe.

For the Rent being 20*s.* yearly.

| | li. | ſh. | d. |
|---|---|---|---|
| *The full value* | 12 | 00 | 00 |
| *The Leaſe of* 21 *years at ten in the hundred, comes to* | 08 | 12 | 11 |
| *Which ſubſtracted, ſhews,* | 03 | 07 | 01 |

III.

*A Tenant hath some time of years in a Lease, and either he or his Land-lord desires to have his years increased to any certain number.*

To find the true worth of such a Bargain, you need only find out by the Tables the true value of the whole number of years desired. Then find out likewise the true value of the lesser number of years, that the Tenant hath already. Lastly, subtract the one from the other, and the remainer shews how many years purchase the thing is worth,

Thus a Lease of Land for 60 years, wherein the Tenant hath already a Lease of 21 years, is worth about 4 years and a half purchase.

For the Rent being 20 s. yearly.

| | l. | sh. | d. |
|---|---|---|---|
| *The whole 60 years, at 6 per Cent. is worth* | 16 | 03 | 03 |
| *The 21 years at the same rate of 6 per Cent. is* | 11 | 15 | 03 |
| *Which substracted, rests* | 04 | 08 | 00 |

In like manner a Lease of an house for 60 years, wherein a Tenant hath 21 years already, is worth one year, and a quarter purchase, and somewhat more.

For

For the Rent being 20 s. yearly.

| | l. | sh. | d. |
|---|---|---|---|
| The 60 years after ten in the hundred is worth | 09 | 19 | 04 |
| And 21 years at the same rate, is worth | 08 | 12 | 11 |
| Which substracted leaves | 01 | 06 | 05 |

That is, about one year, and one quarter of a years purchase: so that let the house be of what yearly rent it will, the lease will be worth one year, and a quarter of a years purchase and about a moneth over.

The like you may do for any other number of years.

But these extraordinary long Leases are not so profitable for the Land-lord, for they yield him but little more ready money then a Lease of 20 or 30 years shorter.

As now suppose a Land-lord would make a Lease of Land up to 40 years, wherein his Tenant hath 20 years to come, what may it be worth? you shall finde as before.

The Rent being 20 s. a year.

| | l. | sh. | d. |
|---|---|---|---|
| The 40 years are worth at 6 per Centum. | 15 | 00 | 8 |
| The twenty years at the same rate are worth | 11 | 15 | 3 |
| Which substracted, rests | 03 | 5 | 5 |
| Now the Lease of 60 yields but | 4 | 8 | 0 |

So that for little more than one years pur-

purchase he may save 20 years benefit to himself or his heirs out of 60 years. And if the Lease should be longer, as an 100 years, his damage would be worse.

So for a Lease of an house,

| | |
|---|---|
| *The 40 years at* 10 per Centum *are worth* | li. sh. d. 9 15 |
| *The twenty years at the same rate are worth* | 8 10 |
| *Which substracted, Rest.* | 1 5 |
| *The Lease for 60 years, yields but* | 1 6 |

So that by this there will be 20 years saved out of the 60 for very little money. So great loss comes by selling such long Leases or Reversions.

And these Reversions are somewhat considerable in a shorter time; as thus,

Suppose a mans Lease is out within 3 years, and he desires to have a new Lease of 21 years, to begin when his 3 years are out, what is this Lease worth in ready money?

To finde out the worth of this, consider the time he hath in his old Lease, which is 3 years, and this added to 21 years, makes it 24 years. Then look out the full worth of these 24, and substract from it the worth of the 3 years, the rest is the value of the said Lease in ready money.

Thus, if it be a Lease of Land,

The Rent being 20s. a year.

24 years

| | li. | sh. | d |
|---|---|---|---|
| 24 years at six per Centum are worth | 12 | 11 | 0 |
| And 3 years are worth | 2 | 13 | 6 |
| Which substracted, Rests | 9 | 17 | 6 |

Which is ten years, lacking only half a quarters purchase, whereas a Lease of 21 years presently to begin is worth 11 pound, 15 shillings, 3 pence, that is, 11 years and three quarters purchase.

One question more, and so I shall conclude the use of these Tables.

A man hath his life in a parcel of Land, or in an house, and desires to have this Lease for Life changed into a Lease of 21 years.

The rent being 20 s. a year.

| | li. | sh. | d. |
|---|---|---|---|
| A Lease of 21 years of Land, at six per Centum is worth | 11 | 15 | 3 |
| His life (if strong and lusty) may be worth as much as a Lease of 10 years which at the same rate of 6 per Cent. is worth | 7 | 7 | 2 |
| Which substracted, Rests | 4 | 8 | 1 |

And so much is it worth to have his Lease altered, viz. 4 years, and almost half a years purchase.

Many other Rules and Tables concerning Annuities might be propounded, but these I think of most frequent use and necessary consequence, which thus you see may be all per-

performed by this one sort of Tables.

But now since none of these Bargains can be made without respect had to these such like Tables of Interest, or Usury, wherein there must respect be had, not only to simple Use, but to Use upon Use; I hope may without offence to any speak a word or two in the defence of Usury.

The Argument I shall use is only this that if it be not only lawful, but necessary to give and take Use upon Use; then at least, it may be lawful, though not necessary, to give or take moderate simple Use, according to the allowance of the times.

That it is not only lawful but necessary to take or give Use upon Use, is plainly manifest in all these kinde of Bargains, which cannot be made any other way. Now the necessity of these Bargains is manifest to this day, and the lawfulness of them cannot be questioned, being so plainly allowed by the Laws of God, and men.

Indeed many are the abuses there are which, if possible, should be reformed: and to this purpose the Law and our Governors have done their parts, not only formerly but lately, as setting so low a rate of Interest as *6 per Cent* And according to this new rate I have calculated these Tables, whereby

very one may see what he ought to give or take, and so neither endanger nor endamage himself either way.

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## A new and exact Table of Interest, shewing the true Interest due upon any Sum of Money for any time, at the rate of *6 per Centum.*

*For the more exactness in this Table, in every Column the money is reckoned not only in pounds, shillings, and pence, (which is ordinary) but each penny is divided into an hundred parts; which, though it may seem somewhat strange at first, yet they are easily reckoned into farthings, which are more usual with us. For twenty five, which is a quarter of an hundred, make one farthing; fifty of these parts are an half penny, and seventy five are three farthings.*

*This considered, there will be, I hope, no difficulty in the Tables.*

## Tables of Interest at 6 per Cent.

| | | 1 day li. sh. d. c. | 2 dayes li. sh. d. c. | 3 dayes li. sh. d. c. |
|---|---|---|---|---|
| Shill. | 5 | 1 | 2 | |
| | 10 | 2 | 4 | |
| | 15 | 3 | 6 | |
| Pounds. | 1 | 4 | 8 | |
| | 2 | 8 | 16 | |
| | 3 | 12 | 24 | |
| | 4 | 15 | 31 | |
| | 5 | 19 | 39 | |
| | 6 | 23 | 47 | |
| | 7 | 27 | 55 | |
| | 8 | 31 | 63 | 1 |
| | 9 | 35 | 71 | 1 |
| Pounds. | 10 | 39 | 78 | 1 |
| | 20 | 79 | 1 58 | 2 |
| | 30 | 1 18 | 2 36 | 3 |
| | 40 | 1 58 | 3 15 | 4 |
| | 50 | 1 97 | 3 94 | 5 |
| | 60 | 2 36 | 4 73 | 7 |
| | 70 | 2 76 | 5 52 | 8 |
| | 80 | 3 15 | 6 31 | 9 |
| | 90 | 3 55 | 7 10 | 10 |
| | 100 | 0 3 94 | 0 7 89 | 0 11 |
| | 200 | 0 7 89 | 1 3 78 | 1 11 |
| | 300 | 0 11 83 | 1 11 67 | 2 11 |
| | 400 | 1 3 78 | 2 7 56 | 3 11 |
| | 500 | 1 7 72 | 3 3 45 | 4 11 |
| | 600 | 1 11 67 | 3 11 34 | 5 11 |
| | 700 | 2 3 61 | 4 7 22 | 6 10 |
| | 800 | 2 7 56 | 5 3 12 | 7 10 |
| | 900 | 2 11 50 | 5 11 01 | 8 10 |
| | 1000 | 3 3 45 | 6 6 90 | 9 10 |

*Tables of Intereſt at 6 per Cent.*

| | | 4 dayes | | | 5 dayes | | | 6 dayes. | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | li. | ſh. | d. c. | li. | ſh. | d. c. | li. | ſh. | d. c. |
| Shill. | 5 | | | 4 | | | 5 | | | 6 |
| | 10 | | | 8 | | | 10 | | | 12 |
| | 15 | | | 12 | | | 15 | | | 18 |
| Pounds. | 1 | | | 15 | | | 19 | | | 23 |
| | 2 | | | 31 | | | 39 | | | 47 |
| | 3 | | | 47 | | | 59 | | | 71 |
| | 4 | | | 63 | | | 78 | | | 94 |
| | 5 | | | 78 | | | 98 | | 1 | 18 |
| | 6 | | | 94 | | 1 | 18 | | 1 | 42 |
| | 7 | | 1 | 10 | | 1 | 38 | | 1 | 65 |
| | 8 | | 1 | 26 | | 1 | 58 | | 1 | 89 |
| | 9 | | 1 | 42 | | 1 | 77 | | 2 | 13 |
| Pounds. | 10 | | 1 | 57 | | 1 | 97 | | 2 | 33 |
| | 20 | | 3 | 15 | | 3 | 94 | | 4 | 73 |
| | 30 | | 4 | 73 | | 5 | 91 | | 7 | 10 |
| | 40 | | 6 | 31 | | 7 | 89 | | 9 | 46 |
| | 50 | | 7 | 89 | | 9 | 86 | | 11 | 83 |
| | 60 | | 9 | 46 | | 11 | 83 | 1 | 2 | 20 |
| | 70 | | 11 | 4 | 1 | 1 | 80 | 1 | 4 | 57 |
| | 80 | 1 | 0 | 62 | 1 | 3 | 78 | 1 | 6 | 93 |
| | 90 | 1 | 2 | 20 | 1 | 5 | 75 | 1 | 9 | 30 |
| | 100 | 1 | 3 | 78 | 1 | 7 | 72 | 1 | 11 | 67 |
| | 200 | 2 | 7 | 56 | 3 | 3 | 45 | 3 | 11 | 34 |
| | 300 | 3 | 11 | 34 | 4 | 11 | 18 | 5 | 10 | 1 |
| | 400 | 5 | 2 | 12 | 6 | 6 | 90 | 7 | 10 | 68 |
| | 500 | 6 | 6 | 90 | 8 | 2 | 63 | 9 | 10 | 35 |
| | 600 | 7 | 10 | 63 | 9 | 10 | 35 | 11 | 10 | 2 |
| | 700 | 9 | 2 | 46 | 11 | 6 | 8 | 13 | 9 | 69 |
| | 800 | 10 | 6 | 24 | 15 | 1 | 80 | 15 | 9 | 36 |
| | 900 | 11 | 10 | 2 | 14 | 9 | 53 | 17 | 9 | 4 |
| | 1000 | 13 | 1 | 80 | 16 | 5 | 26 | 19 | 8 | 71 |

## Tables of Interest at 6 per Cent.

| | | 7 dayes | 8 dayes | 9 dayes |
|---|---|---|---|---|
| | | li. th. d. c. | li. th. d. c. | li. th. d. |
| Shill. | 5 | 7 | 8 | |
| | 10 | 13 | 15 | |
| | 15 | 20 | 23 | |
| Pounds | 1 | 27 | 31 | |
| | 2 | 57 | 63 | |
| | 3 | 82 | 94 | 1 |
| | 4 | 1 10 | 1 26 | 1 |
| | 5 | 1 38 | 1 57 | 1 |
| | 6 | 1 65 | 1 89 | 2 |
| | 7 | 1 93 | 2 20 | 2 |
| | 8 | 2 21 | 2 52 | 2 |
| | 9 | 2 48 | 2 84 | 3 |
| Pounds | 10 | 2 76 | 3 15 | 3 |
| | 20 | 5 52 | 6 31 | 7 |
| | 30 | 8 28 | 9 66 | 10 |
| | 40 | 11 04 | 1 0 22 | 1 2 |
| | 50 | 1 1 80 | 1 3 78 | 1 5 |
| | 60 | 1 4 57 | 1 6 93 | 1 9 |
| | 70 | 1 7 33 | 1 10 09 | 2 0 |
| | 80 | 1 10 09 | 2 1 24 | 2 4 |
| | 90 | 2 00 85 | 2 4 40 | 2 8 |
| | 100 | 2 3 61 | 2 8 56 | 2 11 |
| | 200 | 4 7 23 | 5 3 12 | 5 11 |
| | 300 | 6 10 84 | 7 10 68 | 8 10 |
| | 400 | 9 2 46 | 10 9 24 | 11 10 |
| | 500 | 11 6 08 | 13 1 80 | 14 9 |
| | 600 | 13 9 69 | 15 9 36 | 17 9 |
| | 700 | 16 1 31 | 18 4 93 | 1 0 8 |
| | 800 | 18 4 93 | 1 01 0 49 | 1 3 8 |
| | 900 | 1 0 8 54 | 1 03 8 05 | 1 6 7 |
| | 1000 | 1 3 0 16 | 1 06 3 61 | 1 9 7 |

## Tables of Interest at 6 per Cent.

| | 10 dayes | | | | 20 dayes | | | | 30 dayes | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. | c. | li. | sh. | d. | c. | li. | sh. | d. | c. |
| Shill. | | | | 10 | | | | 19 | | | | 29 |
| | | | | 20 | | | | 39 | | | | 59 |
| | | | | 30 | | | | 59 | | | | 88 |
| Pounds. | | | | 39 | | | | 78 | | 1 | 18 | |
| | | | | 78 | | 1 | 57 | | | 2 | 36 | |
| | | 1 | 18 | | | 2 | 36 | | | 3 | 55 | |
| | | 1 | 57 | | | 3 | 15 | | | 4 | 73 | |
| | | 1 | 97 | | | 3 | 94 | | | 5 | 91 | |
| | | 2 | 36 | | | 4 | 73 | | | 7 | 10 | |
| | | 2 | 76 | | | 5 | 52 | | | 8 | 28 | |
| | | 3 | 15 | | | 6 | 31 | | | 9 | 46 | |
| | | 3 | 55 | | | 7 | 10 | | | 10 | 65 | |
| | | 3 | 94 | | | 7 | 89 | | | 11 | 83 | |
| | | 7 | 89 | | 1 | 3 | 78 | | 1 | 11 | 67 | |
| | | 11 | 83 | | 1 | 11 | 67 | | 2 | 11 | 50 | |
| | 1 | 3 | 78 | | 2 | 7 | 36 | | 3 | 11 | 34 | |
| | 1 | 7 | 72 | | 2 | 3 | 45 | | 4 | 11 | 17 | |
| | 1 | 11 | 67 | | 3 | 11 | 34 | | 5 | 11 | 1 | |
| | 2 | 3 | 61 | | 4 | 7 | 23 | | 6 | 10 | 84 | |
| | 2 | 7 | 56 | | 5 | 3 | 12 | | 7 | 10 | 68 | |
| | 2 | 11 | 50 | | 5 | 11 | 1 | | 8 | 10 | 52 | |
| | 3 | 3 | 45 | | 6 | 6 | 90 | | 9 | 10 | 35 | |
| | 6 | 6 | 90 | | 13 | 1 | 80 | | 19 | 8 | 71 | |
| | 9 | 10 | 35 | | 19 | 8 | 71 | | 1 | 9 | 7 | 06 |
| | 13 | 1 | 80 | | 1 | 6 | 3 | 61 | 1 | 19 | 5 | 42 |
| | 16 | 5 | 26 | | 1 | 12 | 10 | 52 | 2 | 9 | 3 | 78 |
| | 19 | 8 | 71 | | 1 | 19 | 5 | 42 | 2 | 19 | 2 | 13 |
| | 1 | 3 | 0 | 16 | 2 | 6 | 0 | 32 | 3 | 9 | 0 | 49 |
| | 1 | 6 | 3 | 61 | 2 | 12 | 7 | 23 | 3 | 18 | 10 | 84 |
| | 1 | 9 | 7 | 06 | 2 | 19 | 2 | 13 | 4 | 8 | 9 | 20 |
| | 1 | 12 | 10 | 52 | 3 | 5 | 9 | 4 | 4 | 18 | 7 | 56 |

## Tables of Interest at 6 per Cent.

| | 1 Moneth. | 2 Moneths. | 3 Moneths. |
|---|---|---|---|
| | li. th. s. d. | li. th. s. d. | li. th. s. d. |
| Shill. 5 | 2 | 6 0 | 9 |
| 10 | 6 | 1 2 0 | 1 8 |
| 15 | 9 | 1 2 0 | 2 7 |
| Pounds 1 | 1 2 | 2 4 0 | 3 6 |
| 2 | 2 4 | 4 8 0 | 7 0 |
| 3 | 3 6 | 7 2 0 | 10 6 |
| 4 | 4 8 | 9 6 0 | 1 2 0 |
| 5 | 6 0 | 1 0 0 | 1 6 0 |
| 6 | 7 2 | 1 2 4 0 | 1 9 0 |
| 7 | 8 4 | 1 4 8 0 | 2 1 0 |
| 8 | 9 6 | 1 7 2 0 | 2 4 0 |
| 9 | 10 8 | 1 9 6 0 | 2 8 0 |
| 10 | 1 0 0 | 2 0 0 | 3 0 0 |
| 20 | 2 0 0 | 4 0 0 | 6 0 0 |
| 30 | 3 0 0 | 6 0 0 | 9 0 0 |
| 40 | 4 0 0 | 8 0 0 | 12 0 0 |
| 50 | 5 0 0 | 10 0 0 | 15 0 0 |
| 60 | 6 0 0 | 12 0 0 | 18 0 0 |
| 70 | 7 0 0 | 14 0 0 | 1 1 0 0 |
| 80 | 8 0 0 | 16 0 0 | 1 4 0 0 |
| 90 | 9 0 0 | 18 0 0 | 1 7 0 0 |
| 100 | 10 0 0 | 1 0 0 0 | 1 10 0 0 |
| 200 | 1 00 0 0 | 2 0 0 0 | 3 00 0 0 |
| 300 | 1 10 0 0 | 3 0 0 0 | 4 10 0 0 |
| 400 | 2 00 0 0 | 4 0 0 0 | 6 00 0 0 |
| 500 | 2 10 0 0 | 5 0 0 0 | 7 10 0 0 |
| 600 | 3 00 0 0 | 6 0 0 0 | 9 00 0 0 |
| 700 | 3 10 0 0 | 7 0 0 0 | 10 10 0 0 |
| 800 | 4 00 0 0 | 8 0 0 0 | 12 00 0 0 |
| 900 | 4 10 0 0 | 9 0 0 0 | 13 10 0 0 |
| 1000 | 5 00 0 0 | 10 0 0 0 | 15 00 0 0 |

## Tables of Interest at 6 per Cent.

| | | 4 Months. | | | 5 Months. | | | 6 Months. | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | li. | th. | d. | c. | li. | th. | d. | c. | li. | th. | d. | c. |
| Shill. | 5 | | | 1 20 | | | 1 50 | | | | 1 80 | |
| | 10 | | | 2 40 | | | 3 00 | | | | 3 60 | |
| | 15 | | | 3 60 | | | 4 50 | | | | 5 40 | |
| Pounds. | 1 | | | 4 80 | | | 6 0 | | | | 7 20 | |
| | 2 | | | 9 60 | 1 | 0 | 0 | | 1 | 2 | 40 | |
| | 3 | 1 | 2 | 40 | 1 | 6 | 0 | | 1 | 9 | 60 | |
| | 4 | 1 | 7 | 20 | 2 | 0 | 0 | | 2 | 4 | 80 | |
| | 5 | 2 | 0 | 00 | 2 | 6 | 0 | | 3 | 0 | 00 | |
| | 6 | 2 | 4 | 80 | 3 | 0 | 0 | | 3 | 7 | 20 | |
| | 7 | 2 | 9 | 60 | 3 | 6 | 0 | | 4 | 2 | 40 | |
| | 8 | 3 | 2 | 40 | 4 | 0 | 0 | | 4 | 9 | 60 | |
| | 9 | 3 | 7 | 20 | 4 | 6 | 0 | | 5 | 4 | 80 | |
| Pounds. | 10 | | 4 | 0 0 | 5 | 0 | 0 | | 6 | 0 | 0 | |
| | 20 | | 8 | 0 0 | 10 | 0 | 0 | | 12 | 0 | 0 | |
| | 30 | | 12 | 0 0 | 15 | 0 | 0 | | 18 | 0 | 0 | |
| | 40 | | 16 | 0 0 | 1 | 00 | 0 | 0 | 1 | 04 | 0 | 0 |
| | 50 | 1 | 00 | 0 0 | 1 | 05 | 0 | 0 | 1 | 10 | 0 | 0 |
| | 60 | 1 | 4 | 0 0 | 1 | 10 | 0 | 0 | 1 | 16 | 0 | 0 |
| | 70 | 1 | 8 | 0 0 | 1 | 15 | 0 | 0 | 2 | 2 | 0 | 0 |
| | 80 | 1 | 12 | 0 0 | 2 | 00 | 0 | 0 | 2 | 8 | 0 | 0 |
| | 90 | 1 | 16 | 0 0 | 2 | 05 | 0 | 0 | 2 | 14 | 0 | 0 |
| | 100 | 2 | 0 | 0 0 | 2 | 10 | 0 | 0 | 3 | 0 | 0 | 0 |
| | 200 | 4 | 0 | 0 0 | 5 | 00 | 0 | 0 | 6 | 0 | 0 | 0 |
| | 300 | 6 | 0 | 0 0 | 7 | 10 | 0 | 0 | 9 | 0 | 0 | 0 |
| | 400 | 8 | 0 | 0 0 | 10 | 00 | 0 | 0 | 12 | 0 | 0 | 0 |
| | 500 | 10 | 00 | 0 0 | 12 | 10 | 0 | 0 | 15 | 0 | 0 | 0 |
| | 600 | 12 | 0 | 0 0 | 15 | 00 | 0 | 0 | 18 | 0 | 0 | 0 |
| | 700 | 14 | 0 | 0 0 | 17 | 10 | 0 | 0 | 21 | 0 | 0 | 0 |
| | 800 | 16 | 0 | 0 0 | 20 | 00 | 0 | 0 | 24 | 0 | 0 | 0 |
| | 900 | 18 | 0 | 0 0 | 22 | 10 | 0 | 0 | 27 | 0 | 0 | 0 |
| | 1000 | 20 | 0 | 0 0 | 25 | 00 | 0 | 0 | 30 | 0 | 0 | 0 |

## Tables of Interest at 6 per Cent.

| | 7 Months | | | 8 Months. | | | 9 Months. | | |
|---|---|---|---|---|---|---|---|---|---|
| | l. sh. | d. | c. | l. sh. | d. | c. | l. sh. | d. | c. |
| Shill. 5 | | 2 | 10 | | 2 | 40 | | 2 | 7 |
| 10 | | 4 | 20 | | 4 | 80 | | 5 | 4 |
| 15 | | 6 | 30 | | 7 | 20 | | 8 | 1 |
| 1 | | 8 | 40 | | 9 | 60 | | 10 | 8 |
| 2 | 1 | 4 | 20 | 1 | 7 | 20 | 1 | 9 | 6 |
| 3 | 2 | 1 | 80 | 2 | 4 | 80 | 2 | 8 | 4 |
| 4 | 2 | 9 | 60 | 3 | 2 | 40 | 3 | 7 | 2 |
| 5 | 3 | 6 | 00 | 4 | 0 | 00 | 4 | 6 | 0 |
| 6 | 4 | 2 | 40 | 4 | 9 | 60 | 5 | 4 | 8 |
| 7 | 4 | 10 | 80 | 5 | 7 | 20 | 6 | 3 | 6 |
| 8 | 5 | 7 | 20 | 6 | 4 | 80 | 7 | 2 | 4 |
| 9 | 6 | 3 | 60 | 7 | 2 | 40 | 8 | 1 | 2 |
| Pounds 10 | 07 | 0 | 0 | 08 | 0 | 0 | 09 | 0 | 0 |
| 20 | 14 | 0 | 0 | 16 | 0 | 0 | 18 | 0 | 0 |
| 30 | 1 01 | 0 | 0 | 1 04 | 0 | 0 | 1 07 | 0 | 0 |
| 40 | 1 08 | 0 | 0 | 1 12 | 0 | 0 | 1 16 | 0 | 0 |
| 50 | 1 15 | 0 | 0 | 2 00 | 0 | 0 | 2 05 | 0 | 0 |
| 60 | 2 02 | 0 | 0 | 2 03 | 0 | 0 | 2 14 | 0 | 0 |
| 70 | 2 09 | 0 | 0 | 2 16 | 0 | 0 | 3 03 | 0 | 0 |
| 80 | 2 16 | 0 | 0 | 3 04 | 0 | 0 | 3 12 | 0 | 0 |
| 90 | 3 03 | 0 | 0 | 3 12 | 0 | 0 | 4 01 | 0 | 0 |
| 100 | 3 10 | 0 | 0 | 4 0 | 0 | 0 | 4 10 | 0 | 0 |
| 200 | 7 00 | 0 | 0 | 8 0 | 0 | 0 | 9 00 | 0 | 0 |
| 300 | 10 10 | 0 | 0 | 12 0 | 0 | 0 | 13 10 | 0 | 0 |
| 400 | 14 00 | 0 | 0 | 16 0 | 0 | 0 | 18 00 | 0 | 0 |
| 500 | 17 10 | 0 | 0 | 20 0 | 0 | 0 | 22 10 | 0 | 0 |
| 600 | 21 00 | 0 | 0 | 24 0 | 0 | 0 | 27 00 | 0 | 0 |
| 700 | 24 10 | 0 | 0 | 28 0 | 0 | 0 | 31 10 | 0 | 0 |
| 800 | 28 00 | 0 | 0 | 32 0 | 0 | 0 | 36 00 | 0 | 0 |
| 900 | 31 10 | 0 | 0 | 36 0 | 0 | 0 | 40 10 | 0 | 0 |
| 1000 | 35 00 | 0 | 0 | 40 0 | 0 | 0 | 45 00 | 0 | 0 |

## Tables of Interest at 6 per Cent.

| | 10 Months. | | | | 11 Months. | | | | 12 Months | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | li. | in. | d. | c. | li. | in. | d. | c. | li. | in. | d. | c. |
| Shill. | | | 3 | 0 | | | 3 | 30 | | | 3 | 60 |
| | | | 6 | 0 | | | 6 | 60 | | | 7 | 20 |
| | | | 9 | 0 | | | 9 | 90 | | | 10 | 80 |
| Pounds. | 1 | | 10 | 0 | 1 | 1 | 20 | | 1 | 2 | 40 | |
| | 2 | | 20 | 0 | 2 | 2 | 40 | | 2 | 4 | 80 | |
| | 3 | | 30 | 0 | 3 | 3 | 60 | | 3 | | 20 | |
| | 4 | | 40 | 0 | 4 | 4 | 80 | | 4 | 7 | 60 | |
| | 5 | | 50 | 0 | 5 | 6 | 00 | | 6 | 0 | 00 | |
| | 6 | | 60 | 0 | 6 | 7 | 20 | | 7 | 2 | 40 | |
| | 7 | | 70 | 0 | 7 | 8 | 40 | | 8 | 4 | 80 | |
| | 8 | | 80 | 0 | 8 | 9 | 60 | | 9 | 7 | 20 | |
| | 9 | | 90 | 0 | 9 | 10 | 80 | | 10 | 8 | 60 | |
| Pounds. | 10 | | 10 | 0 | 0 | 11 | 0 | 0 | 12 | 0 | 0 | 0 |
| | 20 | 1 | 00 | 0 | 0 | 1 | 02 | 0 | 0 | 1 | 04 | 0 | 0 |
| | 30 | 1 | 10 | 0 | 0 | 1 | 13 | 0 | 0 | 1 | 16 | 0 | 0 |
| | 40 | 2 | 00 | 0 | 0 | 2 | 04 | 0 | 0 | 2 | 08 | 0 | 0 |
| | 50 | 2 | 10 | 0 | 0 | 2 | 15 | 0 | 0 | 3 | 00 | 0 | 0 |
| | 60 | 3 | 00 | 0 | 0 | 3 | 06 | 0 | 0 | 3 | 12 | 0 | 0 |
| | 70 | 3 | 10 | 0 | 0 | 3 | 17 | 0 | 0 | 4 | 04 | 0 | 0 |
| | 80 | 4 | 00 | 0 | 0 | 4 | 08 | 0 | 0 | 4 | 16 | 0 | 0 |
| | 90 | 4 | 10 | 0 | 0 | 4 | 19 | 0 | 0 | 5 | 08 | 0 | 0 |
| | 100 | 5 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 6 | 0 | 0 | 0 |
| | 200 | 10 | 0 | 0 | 0 | 11 | 00 | 0 | 0 | 12 | 0 | 0 | 0 |
| | 300 | 15 | 0 | 0 | 0 | 16 | 10 | 0 | 0 | 18 | 0 | 0 | 0 |
| | 400 | 20 | 0 | 0 | 0 | 22 | 00 | 0 | 0 | 24 | 0 | 0 | 0 |
| | 500 | 25 | 0 | 0 | 0 | 27 | 10 | 0 | 0 | 30 | 0 | 0 | 0 |
| | 600 | 30 | 0 | 0 | 6 | 33 | 00 | 0 | 0 | 36 | 0 | 0 | 0 |
| | 700 | 35 | 0 | 0 | 0 | 38 | 10 | 0 | 0 | 42 | 0 | 0 | 0 |
| | 800 | 40 | 0 | 0 | 0 | 44 | 00 | 0 | 0 | 48 | 0 | 0 | 0 |
| | 900 | 45 | 0 | 0 | 0 | 49 | 10 | 0 | 0 | 54 | 0 | 0 | 0 |
| | 1000 | 50 | 0 | 0 | 0 | 55 | 00 | 0 | 0 | 60 | 0 | 0 | 0 |

## Tables of Interest at 6 per Cent.

| | | 7 Months | | | 8 Months. | | | 9 Months. | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | l. sh. d. | | c. | l. sh. d. | | c. | l. sh. d. | | c. |
| Shill. | 5 | | 2 | 10 | | 2 | 40 | | 2 | 7 |
| | 10 | | 4 | 20 | | 4 | 80 | | 5 | 4 |
| | 15 | | 6 | 30 | | 7 | 20 | | 8 | 1 |
| | 1 | | 8 | 40 | | 9 | 60 | | 10 | 8 |
| Pounds. | 2 | 1 | 4 | 20 | 1 | 7 | 20 | 1 | 9 | 6 |
| | 3 | 2 | 1 | 80 | 2 | 4 | 80 | 2 | 8 | 4 |
| | 4 | 2 | 9 | 60 | 3 | 2 | 40 | 3 | 7 | 2 |
| | 5 | 3 | 6 | 00 | 4 | 0 | 00 | 4 | 6 | 0 |
| | 6 | 4 | 2 | 40 | 4 | 9 | 60 | 5 | 4 | 8 |
| | 7 | 4 | 10 | 80 | 5 | 7 | 20 | 6 | 3 | 6 |
| | 8 | 5 | 7 | 20 | 6 | 4 | 80 | 7 | 2 | 4 |
| | 9 | 6 | 3 | 60 | 7 | 2 | 40 | 8 | 1 | 2 |
| | 10 | | 07 | 0 | | 08 | 0 | | 09 | 0 |
| | 20 | | 14 | 0 | | 16 | 0 | | 18 | 0 |
| | 30 | 1 | 01 | 0 | 1 | 04 | 0 | 1 | 07 | 0 |
| | 40 | 1 | 08 | 0 | 1 | 12 | 0 | 1 | 16 | 0 |
| | 50 | 1 | 15 | 0 | 2 | 00 | 0 | 2 | 05 | 0 |
| | 60 | 2 | 02 | 0 | 2 | 03 | 0 | 2 | 14 | 0 |
| | 70 | 2 | 09 | 0 | 2 | 16 | 0 | 3 | 03 | 0 |
| | 80 | 2 | 16 | 0 | 3 | 04 | 0 | 3 | 12 | 0 |
| | 90 | 3 | 03 | 0 | 3 | 12 | 0 | 4 | 01 | 0 |
| | 100 | 3 | 10 | 0 | 4 | 0 | 0 | 4 | 10 | 0 |
| | 200 | 7 | 00 | 0 | 8 | 0 | 0 | 9 | 00 | 0 |
| | 300 | 10 | 10 | 0 | 12 | 0 | 0 | 13 | 10 | 0 |
| | 400 | 14 | 00 | 0 | 16 | 0 | 0 | 18 | 00 | 0 |
| | 500 | 17 | 10 | 0 | 20 | 0 | 0 | 22 | 10 | 0 |
| | 600 | 21 | 00 | 0 | 24 | 0 | 0 | 27 | 00 | 0 |
| | 700 | 24 | 10 | 0 | 28 | 0 | 0 | 31 | 10 | 0 |
| | 800 | 28 | 00 | 0 | 32 | 0 | 0 | 36 | 00 | 0 |
| | 900 | 31 | 10 | 0 | 36 | 0 | 0 | 40 | 10 | 0 |
| | 1000 | 35 | 00 | 0 | 40 | 0 | 0 | 45 | 00 | 0 |

## Tables of Interest at 6 per Cent.

| | | 10 Months. | | | 11 Months. | | | 12 Months | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | li. | sh. | d. | li. | sh. | d. | li. | sh. | d. |
| Shill. | 5 | | | 3 | | | 3 | | | 3 |
| | 10 | | | 6 | | | 6 | | | 7 |
| | 15 | | | 9 | | | 9 | | | 10 |
| Pounds. | 1 | | 1 | 0 | 1 | 1 | 2 | 1 | 2 | 4 |
| | 2 | | 2 | 0 | 2 | 2 | 4 | 2 | 4 | 8 |
| | 3 | | 3 | 0 | 3 | 3 | 6 | 3 | | 2 |
| | 4 | | 4 | 0 | 4 | 4 | 8 | 4 | 7 | 6 |
| | 5 | | 5 | 0 | 5 | 6 | 0 | 6 | 0 | 0 |
| | 6 | | 6 | 0 | 6 | 7 | 2 | 7 | 2 | 4 |
| | 7 | | 7 | 0 | 7 | 8 | 4 | 8 | 4 | 8 |
| | 8 | | 8 | 0 | 8 | 9 | 6 | 9 | 7 | 2 |
| | 9 | | 9 | 0 | 9 | 10 | 8 | 10 | 9 | 6 |
| | 10 | | 10 | 0 | 11 | 0 | 0 | 12 | 0 | 0 |
| | 20 | 1 | 00 | 0 | 1 | 02 | 0 | 1 | 04 | 0 |
| | 30 | 1 | 10 | 0 | 1 | 13 | 0 | 1 | 16 | 0 |
| | 40 | 2 | 00 | 0 | 2 | 04 | 0 | 2 | 08 | 0 |
| | 50 | 2 | 10 | 0 | 2 | 15 | 0 | 3 | 00 | 0 |
| | 60 | 3 | 00 | 0 | 3 | 06 | 0 | 3 | 12 | 0 |
| | 70 | 3 | 10 | 0 | 3 | 17 | 0 | 4 | 04 | 0 |
| | 80 | 4 | 00 | 0 | 4 | 08 | 0 | 4 | 16 | 0 |
| | 90 | 4 | 10 | 0 | 4 | 19 | 0 | 5 | 08 | 0 |
| Pounds. | 100 | 5 | 00 | 0 | 5 | 10 | 0 | 6 | 0 | 0 |
| | 200 | 10 | 00 | 0 | 11 | 00 | 0 | 12 | 0 | 0 |
| | 300 | 15 | 00 | 0 | 16 | 10 | 0 | 18 | 0 | 0 |
| | 400 | 20 | 00 | 0 | 22 | 00 | 0 | 24 | 0 | 0 |
| | 500 | 25 | 00 | 0 | 27 | 10 | 0 | 30 | 0 | 0 |
| | 600 | 30 | 00 | 0 | 33 | 00 | 0 | 36 | 0 | 0 |
| | 700 | 35 | 00 | 0 | 38 | 10 | 0 | 42 | 0 | 0 |
| | 800 | 40 | 00 | 0 | 44 | 00 | 0 | 48 | 0 | 0 |
| | 900 | 45 | 00 | 0 | 49 | 10 | 0 | 54 | 0 | 0 |
| | 1000 | 50 | 00 | 0 | 55 | 00 | 0 | 60 | 0 | 0 |

*The use of these Tables.*

NOw to finde the Intereſt of any ſumme of money for any time, by this Table; firſt look the ſumme of money on the ſide of the Table; then finde the time required at the head of the Table; and in the ſquare meeting of theſe two, you ſhall finde the Intereſt thereof. Only note, if you can not finde your ſumme of money, or the time all at once, you muſt take it at two or three times and ſo add them together.

Thus the Intereſt of 146 pounds for 6 months will be found thus,

| | li. | ſh. | d. |
|---|---|---|---|
| 100 *pounds for 6 months is* | 3 | 0 | 0 |
| 40 *pounds for 6 months is* | 1 | 4 | 0 |
| 6 *pound for 6 months is* | 0 | 3 | 7½ |
| *In all* | 4 | 7 | 7½ |

Which is 4 pounds, 7 ſhillings, 7 pence and 20 hundred parts of a penny, that is almoſt a farthing, as I noted before.

And thus you may do for any other ſumme of money, and for the more exactneſs I have ſet down the Intereſt money, not only in months, but in ſingle dayes to a month. Now a month in theſe Tables is ſuppoſed to be juſt the 12th part of a year, but yet it is ordinarily reckoned by the uſual months of the year, *Jan. Feb. March, &c.*

But this way of reckoning by months is not altogether so exact as it might be wished; for some months have but 30 dayes, and others 31, and *February* hath commonly but 28 And therefore it may be worth the while (especially in great sums) to look more curiously into the time, and count it by dayes: for otherwise there may be wrong done either to the lender or borrower unawares.

For instance, suppose a Bond made the 10th of *February* for six months, or half a year, the ordinary time. If you reckon by months, it will be due the 10th. of *August*: but since there are 365 dayes in a year, the half thereof is 182 dayes and an half, but you cannot reckon less then 183 dayes; and if you account these 183 days from the 10th. of *February*, they will reach to the 12th. of *August*. So that by reckoning the time by the months, the borrower will pay the money two dayes too soon. Now if the sum of money be but 1000 pound, the Interest for those two dayes will be 6 shillings 7 pence (very near) and so much wrong the borrower receives, and the Statute (perhaps) is broken hereby.

To remedy this, I have observed, that Scriveners usually make such Bonds, to be paid alwayes two dayes after the day

whereon the Bond is dated.

But herein also they may do as much more wrong on the other side, though with less danger of breaking the Statute. For suppose a Bond be made upon the 10th of *August*, they (according to this rule) make it to be paid the 12 of *February*; whereas accounting 183 dayes (as they ought to do) for the half year, the Bond will be (justly) due upon the 9th. of *February*: and so by this means the Lender loseth three dayes Interest.

Again, if a Bond be made the 10th of *February* to be paid the 12 of *August*; (although in this (by chance) there is no wrong to either party: yet if a new Bond be made this 12 of *August*, to be paid the 14 of *February*, the Lender yon see in the whole year loseth four dayes, which is very considerable in great sums of money, or when Bonds are often renewed.

To avoid these inconveniences, I have made these following Tables; by which you shall know both the exact time of any part of a year in dayes; and also the Interest which is due for any time or number of dayes: Only herein I must intreat you to walk a step further into the Art of *Arithmetick*, and instead of *Addition* to use *Multiplication*.

Table

*Tables of Interest at 6 per Centum.*

| D. | January. | D. | February. | D. | March. |
|---|---|---|---|---|---|
| 1 | 0001.643 | 32 | 0052.606 | 60 | 009.8630 |
| 2 | 0003.287 | 33 | 0054.246 | 61 | 0100.275 |
| 3 | 004.931 | 34 | 055 890 | 62 | 101.917 |
| 4 | 006.575 | 35 | 057.534 | 63 | 103,561 |
| 5 | 008.219 | 36 | 059.178 | 64 | 105.205 |
| 6 | 009.863 | 37 | 060.821 | 65 | 106,849 |
| 7 | 0011.506 | 38 | 0062.465 | 66 | 0108,493 |
| 8 | 013.150 | 39 | 064.109 | 67 | 110,136 |
| 9 | 014.794 | 40 | 065.753 | 68 | 111,780 |
| 10 | 016.438 | 41 | 067,398 | 69 | 113,424 |
| 11 | 018.082 | 42 | 069.941 | 70 | 115,068 |
| 12 | 0019.726 | 43 | 0070.684 | 71 | 0116.712 |
| 13 | 021,369 | 44 | 072. 328 | 72 | 118,356 |
| 14 | 023.013 | 45 | 073.972 | 73 | 120,000 |
| 15 | 024.657 | 46 | 075.616 | 74 | 121,643 |
| 16 | 026.301 | 47 | 077.260 | 75 | 123,287 |
| 17 | 0027.945 | 48 | 0078.904 | 76 | 0124,931 |
| 18 | 029.589 | 49 | 080.547 | 77 | 126.575 |
| 19 | 031.232 | 50 | 082.957 | 78 | 128,219 |
| 20 | 032.876 | 51 | 083.865 | 79 | 129,863 |
| 21 | 034.520 | 52 | 085,479 | 80 | 131,506 |
| 22 | 0036.164 | 53 | 0087.123 | 81 | 0133,150 |
| 23 | 037.808 | 54 | 088.767 | 82 | 134 794 |
| 24 | 039.452 | 55 | 090.410 | 83 | 136,438 |
| 25 | 041.095 | 56 | 092,054 | 84 | 138,082 |
| 26 | 0042.739 | 57 | 093.691 | 85 | 0139.726 |
| 27 | 044.383 | 58 | 0095. 342 | 86 | 141,369 |
| 28 | 046.027 | 59 | 0096. 986 | 87 | 143,013 |
| 29 | 047.671 | | | 88 | 144,657 |
| 30 | 0049.315 | | | 89 | 0146,301 |
| 31 | 0050.958 | | | 90 | 0147.945 |

Tables of Interest at 6 per Centum.

| D. | April. | D. | May. | D. | June. |
|---|---|---|---|---|---|
| 1 | 91 | 0149,589 | 121 | 0198,904 | 152 | 0249,8[illegible] |
| 2 | 92 | 0151,232 | 122 | 0200,547 | 153 | 0251,5[illegible] |
| 3 | 93 | 0152,876 | 123 | 202,191 | 154 | 253,1[illegible] |
| 4 | 94 | 0154,520 | 124 | 0203,835 | 155 | 0254,7[illegible] |
| 5 | 95 | 156,164 | 125 | 205,479 | 156 | 256,4[illegible] |
| 6 | 96 | 157,80[illegible] | 126 | 207 123 | 157 | 258,0[illegible] |
| 7 | 97 | 159,452 | 127 | 208,767 | 158 | 259,7[illegible] |
| 8 | 98 | 0161,09[illegible] | 128 | 0210,410 | 159 | 0261,3[illegible] |
| 9 | 99 | 162,739 | 129 | 212,054 | 160 | 263,0[illegible] |
| 10 | 100 | 164,383 | 130 | 213,698 | 161 | 264,6[illegible] |
| 11 | 101 | 166,027 | 131 | 215,342 | 162 | 266,3[illegible] |
| 12 | 102 | 0167,671 | 132 | 0216,986 | 163 | 0267,9[illegible] |
| 13 | 10 | 169,315 | 133 | 218,630 | 164 | 269,5[illegible] |
| 14 | 10 | 170,958 | 134 | 220,273 | 165 | 271,2[illegible] |
| 15 | 105 | 172,602 | 135 | 221,917 | 166 | 272,8[illegible] |
| 16 | 106 | 0174,246 | 136 | 0223,561 | 167 | 0274,5[illegible] |
| 17 | 107 | 175,890 | 137 | 225,205 | 168 | 276,1[illegible] |
| 18 | 108 | 177,534 | 138 | 226,849 | 169 | 277,8[illegible] |
| 19 | 109 | 179,178 | 139 | 228,493 | 170 | 279,4[illegible] |
| 20 | 110 | 0180,821 | 140 | 0230,136 | 171 | 0281,1[illegible] |
| 21 | 111 | 182,465 | 141 | 231,780 | 172 | 282,7[illegible] |
| 22 | 112 | 184,109 | 142 | 233,424 | 173 | 284,4[illegible] |
| 23 | 113 | 185,753 | 143 | 235,068 | 174 | 286,0[illegible] |
| 24 | 114 | 0187,397 | 144 | 0236,712 | 175 | 0287,6[illegible] |
| 25 | 115 | 189,041 | 145 | 238,356 | 176 | 289,3[illegible] |
| 26 | 116 | 190,684 | 146 | 240,000 | 177 | 290,9[illegible] |
| 27 | 117 | 192,328 | 147 | 241,643 | 178 | 292,6[illegible] |
| 28 | 118 | 0193,972 | 148 | 0243,287 | 179 | 0294,2[illegible] |
| 29 | 119 | 195,616 | 149 | 244,931 | 180 | 0295,8[illegible] |
| 30 | 120 | 197,260 | 150 | 0246,575 | 181 | 0297,5[illegible] |
| 31 | | | 151 | 0248,219 | | |

*Tables of Interest at 6 per Centum.*

| D. | July. | D. | August. | D. | Septemb. |
|---|---|---|---|---|---|
| 1 | 182 0299,178 | 213 | 0350,130 | 244 | 0401,093 |
| 2 | 183 0300,821 | 214 | 0351,788 | 245 | 0402,739 |
| 3 | 184 302,465 | 215 | 353,424 | 246 | 404,393 |
| 4 | 185 304,109 | 216 | 355,068 | 247 | 406,027 |
| 5 | 186 0305,763 | 217 | 0356,712 | 248 | 0407 671 |
| 6 | 187 307,397 | 218 | 358,356 | 249 | 409,315 |
| 7 | 188 3 9,041 | 219 | 360,200 | 250 | 410 958 |
| 8 | 189 310,684 | 220 | 361,643 | 251 | 412,602 |
| 9 | 190 312,328 | 221 | 363,287 | 252 | 414,246 |
| 10 | 191 0313,973 | 222 | 0364,931 | 253 | 0415,890 |
| 11 | 192 315,616 | 223 | 366,575 | 254 | 417,534 |
| 12 | 193 317,260 | 224 | 368,219 | 255 | 419 178 |
| 13 | 194 318,904 | 225 | 369,863 | 256 | 420,821 |
| 14 | 195 320,547 | 226 | 371,506 | 257 | 422,465 |
| 15 | 196 0322,191 | 227 | 0373,150 | 258 | 0424, 09 |
| 16 | 197 323,835 | 228 | 374,794 | 259 | 425,753 |
| 17 | 198 325,479 | 229 | 376,438 | 260 | 427,397 |
| 18 | 199 327,123 | 230 | 378,082 | 261 | 429,041 |
| 19 | 200 328,767 | 231 | 379,726 | 262 | 430,684 |
| 20 | 201 0330,410 | 232 | 0381,369 | 263 | 0432,328 |
| 21 | 202 332,054 | 233 | 383,013 | 264 | 433,972 |
| 22 | 203 333,698 | 234 | 384,657 | 265 | 435,616 |
| 23 | 204 335,542 | 235 | 386,301 | 266 | 437,260 |
| 24 | 205 336,986 | 236 | 387,945 | 267 | 438,904 |
| 25 | 206 0338,630 | 237 | 0389,589 | 268 | 0440,547 |
| 26 | 207 340,272 | 238 | 391,232 | 269 | 442,191 |
| 27 | 208 341,917 | 239 | 392,876 | 270 | 443,835 |
| 28 | 209 343,561 | 240 | 394,520 | 271 | 445,479 |
| 29 | 210 345,205 | 241 | 396,164 | 272 | 0447,123 |
| 30 | 211 0346,849 | 242 | 0397 8 8 | 273 | 0448,767 |
| 31 | 212 0348,493 | 243 | 0399,152 | | |

Tables of Interest at 6 per Centum.

| D. | October. | D. | November. | D. | December. |
|---|---|---|---|---|---|
| 1 | 274 0450,410 | 305 | 0501,369 | 335 | 0550,002 |
| 2 | 275 0452,054 | 306 | 0503,013 | 336 | 0551,328 |
| 3 | 276 453,698 | 307 | 504,657 | 337 | 553,972 |
| 4 | 277 455,342 | 308 | 506,301 | 338 | 555,616 |
| 5 | 278 456,986 | 309 | 507,945 | 339 | 557,260 |
| 6 | 279 458,630 | 310 | 509,589 | 340 | 558,904 |
| 7 | 280 0460,273 | 311 | 0511,230 | 341 | 0560,547 |
| 7 | 281 461,917 | 312 | 512,876 | 342 | 562,191 |
| 9 | 282 463 561 | 313 | 514,520 | 343 | 563,835 |
| 10 | 283 465,205 | 314 | 516,164 | 344 | 565,479 |
| 11 | 284 466,849 | 315 | 517,808 | 345 | 567,123 |
| 12 | 285 0468,493 | 316 | 0519,452 | 346 | 0568,767 |
| 13 | 286 470,136 | 317 | 521,095 | 347 | 570,410 |
| 14 | 287 471 780 | 318 | 522,739 | 348 | 572,054 |
| 15 | 288 473,424 | 319 | 524,383 | 349 | 573,698 |
| 16 | 289 475 068 | 320 | 526,027 | 350 | 575,342 |
| 17 | 290 0476,712 | 321 | 0527,671 | 351 | 0576,986 |
| 18 | 291 478,356 | 322 | 529,315 | 352 | 578,630 |
| 19 | 292 480,000 | 323 | 530,958 | 353 | 580,273 |
| 20 | 293 481,643 | 324 | 532,608 | 354 | 581,917 |
| 21 | 294 483,287 | 325 | 534,246 | 355 | 583,561 |
| 22 | 295 0484,932 | 326 | 0535,890 | 356 | 0585,205 |
| 23 | 296 486,575 | 327 | 537,534 | 357 | 586,849 |
| 24 | 297 488,219 | 328 | 539,178 | 358 | 588,493 |
| 25 | 298 489,863 | 329 | 540,821 | 359 | 590,136 |
| 26 | 299 0491,506 | 330 | 0542,465 | 360 | 0591,780 |
| 27 | 300 493,150 | 331 | 544,109 | 361 | 593,424 |
| 28 | 301 494,794 | 332 | 545,753 | 362 | 595,068 |
| 29 | 302 496,438 | 333 | 547,397 | 363 | 596,712 |
| 30 | 303 0498,082 | 334 | 0549,041 | 364 | 0598,356 |
| 31 | 304 0499,726 | | | 365 | 0600,000 |

*The use of these Tables are thus.*

THe Tables are so plain, that I suppose they need no demonstration, being made in the form of a plain Almanack; only I shall shew the use thereof in two or three examples.

I. *If a Bond be dated the* 10*th of* February, *when is the half year, or* 183 *dayes out?*

First, in these Tables you shall finde against the 10th. of *February* the number 41, which shews, it is the one and fortieth day from the beginning of the year; and then if you adde 183 dayes being the half year to this 41, it makes 224 dayes. Then look forward till you finde this number, which you shall finde in this Table against the 12th. of *August*, and this is the day when the half year is finished.

II. *How many dayes is it from the* 10*th. of* August, *to the last of* December?

In this you must substract the latter time out of the former time. Thus, against the last of *December*, you shall finde 365 dayes, and against the 10th, of *August* 222 dayes, which substracted out of the other, there re-

mains

mains 143, and ſo many as the dayes required.

I put down this queſtion becauſe many times it will be needful to know the dayes which fall out in ſeveral years, and ſo the number out of which you ſhould ſubſtract will be leſs than the number which you ſhould ſubſtract out of it; in this caſe you may firſt finde the dayes to that years end, and then add the leſſer number which fall out in the year following thereunto.

III. *Thus if you would know how many dayes it is from the tenth of Auguſt to the ninth of* February.

Firſt, from the tenth of *Auguſt* to the years end, as before was found to be 143 dayes; and to this if you adde the dayes found againſt the ninth of *February*, which are 40. it will make 183 dayes, or half a year, and not the 12. of *February*, as I noted before.

The like you may do for any other number of dayes, or any other time of a year, only take notice, that the year conſiſting of 365 dayes, the parts thereof exactly are thus:

*One month, or a twelfth part of a year,* 30 *dayes* 10 *hours.*

*Three months, or one quarter,* 91 *dayes* [illegible] *hours.*

*Six months or an half*, 182 *dayes*, 12 *hours*.
*Nine months*, *or three quarters*, 273 *dayes*, 18. *hours*.

But to keep without danger of the Statute, and to allow some favour to the borrower, if you reckon the parts of the Interest money by the time, then reckon thus,
*For one month, or the twelfth part of a year*, 31 *dayes*.
*For three months, or one quarter*, 92 *dayes*.
*For six months, or an half*, 183 *dayes*.
*For nine months, or three quarters*, 274 *dayes*.

IV. *To know what is the true use of any summe of money for any number of dayes, after the rate of* 6 per Centum.

Having found out the true number of dayes as is before shewed; finde out this number of dayes in the Table, and there you shall finde in a decimal Fraction the true Interest of one pound for the said time: So that the proportion will be thus.

*As* 1*l.* *or* 10000,000
*To the number in the Tables*,
*So any number of pounds inquired*,
*To the like number required*.

Take this number therefore and multiply it by your principal summe, and then cut

cutting off the seven last figures toward your right hand, the remainder will shew you the pounds which it comes to, and the figures cut off, they are a fraction of a pound. But now in the valuation thereof, you need make use but of the four first figures, reckoning the first figure doubled, and it will shew the shillings; if the second figure be more then five, take five out of it, and reckon one shilling more for it; lastly the remainder of that above five, and the next following figure will shew the farthings very near, if you abate but one in 25. Or you may finde the true value of these first four figures in the decimal Table, *page* 26.

*For example.*

What is the Interest of 555 pounds for about half a year, or 182 dayes?

*The number against* 182 *dayes is* 0299 178

*This multiplied* 555 555

1495890
1495890
1495890

*Yields* 166040790

Which, according to the former Rules and Tables, comes to 16 pound 12 shillings, 1 penny, and a little more, *viz.* scarce two tenth parts of a farthing, And

And thus you may do for any other number of even pounds: and if you think this too much labour, then if your principal money be not very much, you need take out but the first 4 figures of the Tables to be multiplied (which are therefore separated from the rest by this point [.]) and then you must cut off but 4 figures from the product, and those remaining will exactly agree with the decimal Table.

*Thus, the four first figures of the former number being* 0299
*Multiplied by* 555

| | |
|---|---|
| | 1495 |
| 1 | 459 |
| 14 | 95 |

*Yields* 16|5585

Which is 16*l*. 12*s*. very near.

But if you will be more exact and know also the Interest of shillings and pence, if there be any shillings and pence belonging to your principal summe; you must first reduce them into one decimal fraction, by the Table, and then take the 4 first figures of this number in the Table, and multiply them together. And observe how many figures you multiply by, and cut off so many figures from the end of the product

duct, the rest of the figures; if they be three put one cipher before them; if they be two, put two ciphers before them, to make them agree to the 4 places in the Decimal Table, and seek that sum in the Decimal Table, which will shew you the true value thereof. Note, that it cannot exceed 0600, which is 1 shilling 2 pence, and 40 hundred parts.

Thus for example, if your principal summe were 555 pound, 11 shillings, the Interest of the 11 shillings must thus be found:

| | |
|---|---|
| *The Interest for 18 dayes in* | ,0299 |
| *11 shill. reduced into decimals is* | 55 |
| | 1495 |
| | 1495 |
| | ,0164,45 |

By cutting off the two last figures, and adding one cipher to the beginning to make the three figures to four places; the sum is 0164, which in the decimal Table shews 4 pence very near.

Or yet more exactly, if you adde this to your former product of the 555*l.*

| | *l.* |
|---|---|
| *which was* | 16,6043,79 |
| *and this last* | ,0164,45 |
| *In all* | 16,6208,24 |

So the whole Interest appears to be 16 pound, 12 shillings, 5 pence.

But, methinks I hear some taxing of me for being so scrupulous in accounting the Interest of money by dayes, and not rather teach some way, how a just abatement should be made for those payments which are made before the year is fully out. For the Act allows to take 6 pound in the hundred for the whole year; now if a man takes 3 pound *per Centum* for the half year; the said 3 pound in the other half year will yield, at the same rate, 1 shilling, 9 pence, 2 farthings; and thus, some think, a man takes more than the Act allows, and comes within the danger thereof.

But the Law herein looks upon the year, as the fittest measure of time to proportion the Interest by; and the intent of the law is to restrain the grosser abuses of Extortioners, and not to take notice of such nicities as this; which would have made it either very large and tedious, by appointing exact Tables for it, moneth by moneth, nay, day by day; or else intricate and full of snares for men to fall into. The plain meaning of the Law is this; that, as a year should measure the time, so the said 6 pound should proportion the Interest; the parts of the one answering to the parts of the

the other; neither allowing any Inte upon the Interest, for the time under o ver a year, nor tying any man to let or u up money for the whole year.

The usual custom therefore in this c is a good Comment upon this Law; i which most Bonds of this nature are m to be paid at six months ends, and yet full half of the whole years Interest f lowed, which would never have been long and frequently done, if it had b thought any breach of the Statute.

And therefore, though there might an allowance made by way of rebatem and the case may seem somewhat like, it is not the same; neither doth the fri est rebatement used among Merchan take any notice thereof, but is grounded on another cause, as you may see mor the next particular.

# Of Rebatement.

MErchants, though they ſeldom let out Money to uſe, yet they often take up much; and that not only the common way by Bond, which I ſpake of before, but by way of Rebatement; which is thus.

A Merchant being to ſell any commodity, he either ſells it for ready money, or to be paid at a certain time, *viz.* 3, 6, or 12 Months after. But the bargain being thus made, it often falls out, that with good convenience to the buyer, or ſeller, or both, to have this money paid before it be due; and then there is and ought to be an allowance or abatement between them out of the principal, according to the rate of Intereſt money allowed at that time.

Now this rebatement hath been uſually reckoned by the Table of ordinary Intereſt, abating ſo much out of the principal debt, as the uſe of the ſaid principal would come to in the time agreed upon. But in reckoning thus, there will alwayes be ſome damage to the Creditor who doth abate, which though in little ſummes, will not be much

much, yet in greater ſummes of money, as this rebatement is moſt uſed in, it be very conſiderable, and is of late ob ved by the moſt skilful Merchants.

*For Example.*

The Intereſt of an hundred pound for months comes to 3 pound. But now poſe *A* oweth to *B* an hundred pound be paid ſix months hence: and *A* a are agreed to give and take rebate; he ſay *B* ought not to abate full 3*l.* out of 100*l.* as the Table of Intereſt will ſh but ſomewhat leſs. Indeed, if the d had been 103 pound, then there ſh have been 3 pound abated out of the de but there being but an hundred pound in all, and that not till the end of months, there muſt be ſo much a leſs portion for the abatement, as there is a ference between 103 and 100, which may thus found by the uſe of proportion.

*li. li. li. li.*

*As* 103 *to* 100. *ſo* 100 *to* 97. 0874.

Which is 97 pound, 1 ſhilling, 9 pe So that there is only 2 pound, 18 ſhilli 3 pence to be abated, and not 3 pound, by the other reckoning.

Therefore if you would finde out worth of any debt, due hereafter in re

money; First finde out by the Tables of Interest, what an hundred pound will yield in the time desired: then work by the rule of proportion thus,

*As an 100 pound, with the Interest thereof for that time,*
*Is to an 100 pounds;*
*So the debt to be paid at that time*
*To its worth in ready money.*

Thus, to finde the worth of an hundred pound, due 12 moneths hence.

As 106 to 100; so 100 to 94. 3396. which is 94 pound, 6 shillings, 9 pence 2 farthings. So that here is not six pounds to be abated out of the 100 pound, (as some have thought) but 5 pound, 13 shillings, 2 pence, 2 farthings. And thus the Creditour may save 6 shillings, 9 pence, 2 farthings, which by the other way of reckoning he will rebate in his own wrong, And if the summe be greater, or the time of payment longer, his damage will be more.

Again you see that this money to be rebated doth not increase equally, in an equal time; there was 2 pound, 18 shillings, 3 pence to be abated out of the 100 pound, due at 6 months, but there is 5 pound, 13 shillings, 2 pence, 2 farthings to be abated for the 100 pounds due at 12 moneths; which

which is not the double of the other, fo
it ſhould have been, 5 pound, 16 ſhillin
6 pence. So that theſe Tables muſt be c
up for every Month at the leaſt, whic
the moſt uſual way of reckoning the ti
of payments among Merchants, and th
I have drawn them out to 24 Mone
which is as long (I think) as any Merch
deſires to truſt, or will be content to reb
for.

## Rebate at 6 per Cent.

| | 1 Month | | | 2 Months. | | | 3 Months. | | |
|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. c. | li. | sh. | d. c. | li. | sh. | d. c. |
| Shill. 5 | | | 3 | | 0 | 59 | | | 89 |
| 10 | | | 6 | | 1 | 19 | | 1 | 77 |
| 15 | | | 9 | | 1 | 78 | | 2 | 66 |
| 1 | | 1 | 19 | | 2 | 37 | | 3 | 54 |
| 2 | | 2 | 39 | | 4 | 75 | | 7 | 09 |
| 3 | | 3 | 58 | | 7 | 12 | | 10 | 64 |
| 4 | | 4 | 78 | | 9 | 50 | | 1 2 | 18 |
| 5 | | 5 | 97 | | 11 | 87 | | 1 5 | 73 |
| 6 | | 7 | 17 | | 1 2 | 25 | | 1 9 | 28 |
| 7 | | 8 | 36 | | 1 4 | 62 | | 2 1 | 83 |
| 8 | | 9 | 56 | | 1 7 | 00 | | 2 4 | 37 |
| 9 | | 10 | 75 | | 1 9 | 37 | | 2 7 | 92 |
| Pounds. 10 | | 11 | 94 | | 1 11 | 76 | | 2 11 | 47 |
| 20 | 1 | 11 | 88 | | 3 11 | 52 | | 5 10 | 93 |
| 30 | 2 | 11 | 82 | | 5 11 | 29 | | 8 10 | 40 |
| 40 | 3 | 11 | 76 | | 7 11 | 05 | | 11 9 | 87 |
| 50 | 4 | 11 | 70 | | 9 10 | 81 | | 14 9 | 34 |
| 60 | 5 | 11 | 64 | | 11 10 | 58 | | 17 8 | 80 |
| 70 | 6 | 11 | 59 | | 13 10 | 34 | 1 | 0 8 | 27 |
| 80 | 7 | 11 | 53 | | 15 10 | 10 | 1 | 3 7 | 74 |
| 90 | 8 | 11 | 47 | | 17 09 | 86 | 1 | 6 7 | 21 |
| 100 | 9 | 11 | 40 | 19 | 9 | 62 | 1 | 9 6 | 68 |
| 200 | 19 | 10 | 00 | 1 19 | 7 | 24 | 2 | 19 1 | 36 |
| 300 | 1 9 | 10 | 80 | 2 19 | 4 | 87 | 4 | 8 8 | 04 |
| 400 | 1 19 | 9 | 61 | 3 19 | 2 | 49 | 5 | 18 2 | 72 |
| 500 | 2 9 | 9 | 61 | 4 19 | 0 | 12 | 7 | 7 9 | 40 |
| 600 | 2 19 | 8 | 01 | 5 18 | 9 | 74 | 8 | 17 4 | 08 |
| 700 | 3 9 | 7 | 82 | 6 18 | 7 | 37 | 10 | 6 10 | 76 |
| 800 | 3 19 | 7 | 22 | 7 18 | 4 | 99 | 11 | 16 5 | 44 |
| 900 | 4 9 | 6 | 63 | 8 18 | 2 | 61 | 13 | 6 0 | 12 |
| 1000 | 4 19 | 6 | 03 | 9 18 | 0 | 23 | 14 | 15 6 | 79 |

## Rebate at 6 per Cent.

| | | 4 Month. | | | 5 Months. | | | 6 Months. | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | li. | th. | d. c. | li. | th. | d. c. | li. | th. | d. c. |
| Shill. | 5 | | | 1 10 | | | 1 46 | | | 1 [illegible] |
| | 10 | | | 2 [illegible] | | | 2 93 | | | 3 [illegible] |
| | 15 | | | 3 [illegible] | | | 4 39 | | | 5 [illegible] |
| Pounds. | 1 | | | 4 [illegible] | | | 5 85 | | | 6 [illegible] |
| | 2 | | | 9 41 | | | 11 71 | 1 | 1 | [illegible] |
| | 3 | 1 | 2 | 12 | 1 | 5 | 56 | 1 | 8 | [illegible] |
| | 4 | 1 | 6 | 82 | 1 | 11 | 41 | 2 | 3 | [illegible] |
| | 5 | 1 | 11 | 53 | 2 | 5 | 27 | 2 | 10 | [illegible] |
| | 6 | 2 | 4 | 24 | 2 | 11 | 12 | 3 | 5 | [illegible] |
| | 7 | 2 | 8 | 94 | 3 | 4 | 97 | 4 | 0 | [illegible] |
| | 8 | 3 | 1 | 65 | 3 | 10 | 83 | 4 | 7 | [illegible] |
| | 9 | 3 | 6 | 35 | 4 | 4 | 68 | 5 | 2 | [illegible] |
| Pounds. | 10 | 3 | 11 | [illegible] | 4 | 19 | 54 | 5 | 9 | [illegible] |
| | 20 | 7 | 10 | 12 | 9 | 9 | 07 | 11 | 7 | [illegible] |
| | 30 | 11 | 9 | 10 | 14 | 7 | 61 | 17 | 5 | [illegible] |
| | 40 | 15 | 8 | 23 | 19 | 6 | 15 | 1 | 3 | [illegible] |
| | 50 | 19 | 7 | 29 | 1 | 4 | 4 68 | 1 | 9 | 1 5 |
| | 60 | 1 | 3 | 6 35 | 1 | 9 | 3 22 | 1 | 14 | 11 4 |
| | 70 | 1 | 7 | 5 41 | 1 | 14 | 11 76 | 2 | 0 | 9 [illegible] |
| | 80 | 1 | 11 | 4 47 | 1 | 19 | 00 29 | 2 | 6 | 7 [illegible] |
| | 90 | 1 | 15 | 3 53 | 1 | 2 | 10 85 | [illegible] | | |
| | 100 | 1 | 19 | 2 59 | 2 | 0 | 9 36 | 2 | 10 | [illegible] |
| | 200 | 3 | 18 | 5 18 | 4 | 17 | 6 73 | 5 | 16 | 6 [illegible] |
| | 300 | 5 | 17 | 7 76 | 7 | 6 | 4 10 | 8 | 14 | 9 [illegible] |
| | 400 | 7 | 16 | 10 53 | 9 | 15 | 1 46 | 11 | 13 | 0 [illegible] |
| | 500 | 9 | 16 | 0 94 | 12 | 3 | 10 83 | 14 | 11 | [illegible] |
| | 600 | 11 | 15 | 3 35 | 14 | 12 | 8 19 | 17 | 9 | 6 [illegible] |
| | 700 | 13 | 14 | 6 12 | 17 | 1 | 5 56 | 20 | 7 | [illegible] |
| | 800 | 15 | 13 | 8 70 | 19 | 10 | 2 93 | 23 | 6 | 0 [illegible] |
| | 900 | 17 | 12 | 11 29 | 21 | 19 | 0 29 | 26 | 4 | [illegible] |
| | 1000 | 19 | 12 | 1 88 | 24 | 7 | 9 66 | 29 | 2 | 6 [illegible] |

## Rebates at 6 per Cent.

| | | 7 Months | | | 8 Months. | | | 9 Months | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | li. | th. | d. c. | li. | th. | | li. | th. | d. c. |
| Shill. | 5 | | | 2 03 | | 2 | 31 | | 2 | 5 |
| | 10 | | | 4 06 | | 4 | 61 | | 5 | 1 |
| | 15 | | | 6 09 | | 6 | 91 | | 7 | 7 |
| Pounds. | 1 | | | 9 11 | | 9 | 23 | | 10 | 3 |
| | 2 | 1 | 4 | 23 | 1 | 6 | 46 | 1 | 8 | 6 |
| | 3 | 2 | 0 | 35 | 2 | 3 | 69 | 2 | 7 | 0 |
| | 4 | 2 | 8 | 46 | 3 | 0 | 92 | 3 | 5 | 3 |
| | 5 | 3 | 4 | 58 | 3 | 10 | 15 | 4 | 3 | 6 |
| | 6 | 4 | 0 | 69 | 4 | 7 | 38 | 5 | 2 | 0 |
| | 7 | 4 | 8 | 81 | 5 | 4 | 61 | 6 | 0 | 3 |
| | 8 | 5 | 4 | 93 | 6 | 1 | 85 | 6 | 10 | 6 |
| | 9 | 6 | 1 | 04 | 6 | 11 | 08 | 7 | 9 | 0 |
| | 10 | 6 | 9 | 16 | 7 | 8 | 31 | 8 | 7 | 39 |
| | 20 | 13 | 6 | 32 | 15 | 4 | 61 | 17 | 2 | 7 |
| Pounds. | 30 | 1 | 0 | 3 48 | 1 | 3 | 0 92 | 1 | 5 | 10 95 |
| | 40 | 1 | 7 | 0 64 | 1 | 10 | 9 23 | 1 | 14 | 5 40 |
| | 50 | 1 | 13 | 9 80 | 1 | 18 | 5 54 | 2 | 3 | 0 73 |
| | 60 | 2 | 0 | 6 96 | 2 | 6 | 1 85 | 2 | 11 | 8 10 |
| | 70 | 2 | 7 | 4 12 | 2 | 13 | 10 15 | 3 | 0 | 3 45 |
| | 80 | 2 | 14 | 1 28 | 3 | 1 | 6 46 | 3 | 8 | 10 80 |
| | 90 | 3 | 0 | 10 44 | 3 | 9 | 2 77 | 3 | 17 | 6 15 |
| | 100 | 3 | 7 | 7 59 | 3 | 16 | 11 18 | 4 | 6 | 1 49 |
| | 200 | 6 | 15 | 3 19 | 7 | 13 | 10 15 | 8 | 12 | 2 98 |
| | 300 | 10 | 2 | 10 78 | 11 | 10 | 9 23 | 12 | 18 | 4 48 |
| | 400 | 13 | 10 | 6 38 | 15 | 7 | 8 31 | 17 | 4 | 5 97 |
| | 500 | 16 | 18 | 1 97 | 19 | 4 | 7 38 | 21 | 10 | 7 46 |
| | 600 | 20 | 5 | 9 57 | 23 | 1 | 6 46 | 25 | 16 | 8 95 |
| | 700 | 23 | 12 | 5 16 | 26 | 18 | 5 54 | 30 | 2 | 10 45 |
| | 800 | 27 | 1 | 0 76 | 30 | 15 | 4 61 | 34 | 8 | 11 94 |
| | 900 | 30 | 8 | 8 35 | 34 | 12 | 3 69 | 38 | 15 | 1 44 |
| | 1000 | 33 | 16 | 3 95 | 38 | 9 | 2 77 | 43 | 1 | 2 93 |

## Rebate at 6 per Cent.

| | 10 Months. | | | 11 Months | | | 12 Months | | |
|---|---|---|---|---|---|---|---|---|---|
| | l. sh. | d. | c. | l. | m. | d. c. | l. | m. | d. c. |
| Shill. 5 | | 2 | 05 | | 3 | 13 | | 3 | 21 |
| 10 | | 5 | 71 | | 6 | 25 | | 6 | 42 |
| 15 | | 8 | 57 | | 9 | 38 | | 10 | 03 |
| Pounds 1 | 0 | 11 | 43 | 1 | 0 | 51 | 1 | 1 | 00 |
| 2 | 1 | 10 | 86 | 2 | 1 | 02 | 2 | 2 | 00 |
| 3 | 2 | 10 | 29 | 3 | 1 | 53 | 3 | 4 | 00 |
| 4 | 3 | 9 | 71 | 4 | 2 | 04 | 4 | 6 | 00 |
| 5 | 4 | 9 | 14 | 5 | 2 | 56 | 5 | 7 | 00 |
| 6 | 5 | 8 | 57 | 6 | 3 | 07 | 6 | 9 | 00 |
| 7 | 6 | 8 | 00 | 7 | 3 | 58 | 7 | 11 | 00 |
| 8 | 7 | 7 | 43 | 8 | 4 | 09 | 9 | 0 | 00 |
| 9 | 8 | 6 | 86 | 9 | 4 | 61 | 10 | 2 | 00 |
| Pounds 10 | 9 | 6 | 28 | 10 | 5 | 12 | 11 | 3 | 00 |
| 20 | 19 | 0 | 57 | 1 0 | 10 | 23 | 1 2 | 7 | 00 |
| 30 | 1 8 | 6 | 86 | 1 11 | 2 | 35 | 1 13 | 11 | 00 |
| 40 | 1 18 | 1 | 14 | 2 1 | 8 | 47 | 2 5 | 3 | 00 |
| 50 | 2 7 | 7 | 43 | 2 12 | 1 | 59 | 2 16 | 7 | 00 |
| 60 | 2 17 | 1 | 71 | 3 2 | 6 | 71 | 3 7 | 11 | 00 |
| 70 | 3 6 | 8 | 00 | 3 12 | 11 | 83 | 3 19 | 12 | 00 |
| 80 | 3 16 | 2 | 29 | 4 3 | 4 | 95 | 4 10 | 16 | 00 |
| 90 | 4 5 | 8 | 57 | 4 13 | 10 | 07 | 5 1 | 10 | 00 |
| 100 | 4 15 | 2 | 86 | 5 4 | 3 | 18 | 5 13 | 2 | 00 |
| 200 | 9 10 | 5 | 71 | 10 8 | 6 | 37 | 11 6 | 4 | 00 |
| 300 | 14 5 | 8 | 57 | 15 12 | 9 | 55 | 16 19 | 7 | 00 |
| 400 | 19 0 | 11 | 43 | 20 17 | 0 | 74 | 22 12 | 9 | 00 |
| 500 | 23 16 | 2 | 29 | 26 1 | 3 | 92 | 28 6 | 0 | 00 |
| 600 | 28 11 | 5 | 15 | 31 5 | 7 | 11 | 33 19 | 2 | 00 |
| 700 | 33 6 | 8 | 00 | 36 9 | 10 | 29 | 39 12 | 5 | 00 |
| 800 | 38 1 | 10 | 86 | 41 14 | 1 | 48 | 45 5 | 7 | 00 |
| 900 | 42 17 | 1 | 72 | 46 18 | 4 | 66 | 50 18 | 10 | 00 |
| 1000 | 47 12 | 4 | 57 | 52 2 | 7 | 85 | 56 12 | 3 | 00 |

## Rebates at 6 per Cent.

| | 13 Months | | | 14 Months | | | 15 Months | | |
|---|---|---|---|---|---|---|---|---|---|
| | li. | th. | d. c. | li. | th. | d. c. | li. | th. | d. c. |
| | | | 3 66 | | | 3 92 | | | 4 19 |
| 10 | | | 7 32 | | | 7 85 | | | 8 37 |
| 15 | | | 10 98 | | | 11 77 | 1 | 0 | 56 |
| 1 | 1 | 2 | 63 | 1 | 3 | 70 | 1 | 4 | 78 |
| 2 | 2 | 5 | 29 | 2 | 7 | 40 | 2 | 9 | 49 |
| 3 | 3 | 7 | 94 | 3 | 11 | 10 | 4 | 2 | 22 |
| 4 | 4 | 10 | 59 | 5 | 2 | 80 | 5 | 6 | 93 |
| 5 | 6 | 1 | 24 | 6 | 6 | 50 | 6 | 11 | 72 |
| 6 | 7 | 3 | 89 | 7 | 10 | 20 | 8 | 4 | 47 |
| 7 | 8 | 6 | 53 | 9 | 1 | 90 | 9 | 9 | 21 |
| 8 | 9 | 9 | 18 | 10 | 5 | 61 | 11 | 1 | 96 |
| 9 | 10 | 11 | 83 | 11 | 9 | 21 | 12 | 6 | 7 |
| 10 | 12 | 02 | 48 | | 13 | 1 | 1 | 13 | 11 |
| 20 | 1 | 4 | 4 96 | 1 | 6 | 2 | 2 | 1 | 7 10 |
| 30 | 1 | 16 | 7 44 | 1 | 19 | 3 | 3 | 2 | 1 10 |
| 40 | 2 | 8 | 9 91 | 2 | 12 | 4 | 4 | 2 | 15 9 |
| 50 | 3 | 1 | 0 39 | 3 | 05 | 5 | 5 | 3 | 9 9 |
| 60 | 3 | 13 | 2 87 | 3 | 18 | 6 | 6 | 4 | 3 8 |
| 70 | 4 | 5 | 5 45 | 4 | 11 | 7 | 7 | 5 | 7 8 |
| 80 | 4 | 17 | 7 83 | 5 | 4 | 8 | 8 | 5 | 11 7 |
| 90 | 5 | 9 | 10 31 | 5 | 17 | 9 | 9 | 6 | 5 6 |
| 100 | 6 | 2 | 0 79 | 6 | 10 | 10 | 09 | 6 | 19 6 |
| 200 | 12 | 4 | 1 58 | 13 | 1 | 8 | 19 | 13 | 19 0 |
| 300 | 18 | 6 | 2 37 | 19 | 12 | 6 | 28 | 20 | 18 7 |
| 400 | 24 | 8 | 3 15 | 26 | 3 | 4 | 37 | 27 | 18 1 |
| 500 | 30 | 10 | 3 94 | 32 | 14 | 2 | 47 | 34 | 17 8 |
| 600 | 36 | 12 | 4 73 | 39 | 5 | 0 | 56 | 41 | 17 2 |
| 700 | 42 | 14 | 5 52 | 45 | 15 | 10 | 65 | 48 | 16 8 |
| 800 | 48 | 16 | 6 31 | 52 | 6 | 8 | 75 | 55 | 16 3 |
| 900 | 54 | 18 | 7 10 | 58 | 17 | 6 | 84 | 62 | 15 9 |
| 000 | 61 | 00 | 7 89 | 65 | 8 | 4 | 93 | 69 | 15 4 |

## Rebate at 6 per Cent.

| Pounds | Shill. | 16 Months. li. | th. | o. | c. | 17 Months. li. | th. | d. | c. | 18 Mo li. | sh. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | | | 4 | 44 | | | 4 | 70 | | |
| | 10 | | | 8 | 29 | | | 9 | 40 | | |
| | 15 | | 1 | 1 | 33 | | 1 | 2 | 10 | | 1 |
| 1 | | | 1 | 5 | 78 | | 1 | 6 | 80 | | 1 |
| 2 | | | 2 | 11 | 55 | | 3 | 1 | 60 | | 3 |
| 3 | | | 4 | 5 | 33 | | 4 | 8 | 40 | | 4 |
| 4 | | | 5 | 11 | 11 | | 6 | 1 | 21 | | 6 |
| 5 | | | 7 | 4 | 89 | | 7 | 10 | 01 | | 8 |
| 6 | | | 8 | 10 | 67 | | 9 | 4 | 81 | | 9 |
| 7 | | | 10 | 4 | 44 | | 10 | 11 | 61 | | 11 |
| 8 | | | 11 | 10 | 22 | | 12 | 6 | 41 | | 13 |
| 9 | | | 13 | 4 | 00 | | 14 | 1 | 22 | | 14 |
| 10 | | | 14 | 9 | 78 | | 15 | 8 | 02 | | 16 |
| 20 | | 1 | 9 | 7 | 55 | 1 | 11 | 4 | 04 | 1 | 13 |
| 30 | | 2 | 4 | 5 | 33 | 2 | 7 | 0 | 06 | 2 | 9 |
| 40 | | 2 | 19 | 3 | 11 | 3 | 2 | 8 | 07 | 3 | 6 |
| 50 | | 3 | 14 | 0 | 89 | 3 | 18 | 4 | 09 | 4 | 2 |
| 60 | | 4 | 8 | 10 | 67 | 4 | 14 | 0 | 11 | 4 | 19 |
| 70 | | 5 | 3 | 8 | 44 | 5 | 9 | 8 | 13 | 5 | 15 |
| 80 | | 5 | 18 | 6 | 22 | 6 | 5 | 4 | 15 | 6 | 12 |
| 90 | | 6 | 13 | 4 | 00 | 7 | 1 | 0 | 17 | 7 | 8 |
| 100 | | 7 | 8 | 1 | 78 | 7 | 16 | 8 | 18 | 8 | 5 |
| 200 | | 14 | 16 | 3 | 55 | 15 | 13 | 4 | 37 | 16 | 11 |
| 300 | | 22 | 4 | 5 | 33 | 23 | 10 | 0 | 55 | 24 | 17 |
| 400 | | 29 | 12 | 7 | 11 | 31 | 6 | 8 | 74 | 33 | 03 |
| 500 | | 37 | 0 | 8 | 89 | 39 | 3 | 4 | 92 | 41 | 09 |
| 600 | | 44 | 8 | 10 | 67 | 47 | 0 | 1 | 11 | 49 | 15 |
| 700 | | 51 | 17 | 0 | 40 | 54 | 16 | 9 | 29 | 57 | 1 |
| 800 | | 59 | 5 | 2 | 22 | 62 | 13 | 5 | 48 | 66 | 1 |
| 900 | | 66 | 13 | 4 | 00 | 70 | 10 | 1 | 66 | 74 | 6 |
| 1000 | | 74 | 1 | 5 | 78 | 78 | 6 | 9 | 84 | 82 | 12 |

## Rebate at 6 per Cent.

| | 19 Months. | | | 20 Months. | | | 21 Months. | | |
|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. c. | li. | sh. | d. c. | li. | sh. | d. c. |
| Shill. | | 5 | 20 | | 5 | 45 | | 05 | 70 |
| | | 10 | 41 | | 10 | 91 | | 11 | 40 |
| | | 1 | 3 62 | | 1 | 4 36 | | 1 | 05 10 |
| 1 | | 01 | 08 82 | | 01 | 09 82 | | 01 | 10 80 |
| 2 | | 03 | 05 64 | | 03 | 07 64 | | 03 | 09 61 |
| 3 | | 05 | 02 46 | | 05 | 05 46 | | 05 | 08 42 |
| 4 | | 06 | 11 29 | | 07 | 03 27 | | 07 | 07 22 |
| 5 | | 08 | 08 11 | | 09 | 01 19 | | 09 | 06 03 |
| 6 | | 10 | 04 93 | | 10 | 10 91 | | 11 | 04 83 |
| 7 | | 12 | 01 75 | | 12 | 08 73 | | 13 | 03 64 |
| 8 | | 13 | 10 57 | | 14 | 06 55 | | 15 | 02 45 |
| 9 | | 15 | 07 40 | | 16 | 04 37 | | 17 | 01 25 |
| 10 | | 17 | 04 22 | | 18 | 02 18 | | 19 | 00 05 |
| 20 | 1 | 14 | 08 44 | 1 | 16 | 04 36 | 1 | 18 | 00 11 |
| 30 | 2 | 12 | 00 66 | 2 | 14 | 00 54 | 2 | 17 | 00 16 |
| 40 | 3 | 09 | 04 88 | 3 | 12 | 08 72 | 3 | 16 | 00 22 |
| 50 | 4 | 06 | 09 10 | 4 | 10 | 10 91 | 4 | 15 | 00 27 |
| 60 | 5 | 04 | 01 32 | 5 | 09 | 01 09 | 5 | 14 | 00 33 |
| 70 | 6 | 01 | 05 54 | 6 | 07 | 03 27 | 6 | 13 | 00 38 |
| 80 | 6 | 18 | 09 76 | 7 | 05 | 05 45 | 7 | 12 | 00 44 |
| 90 | 7 | 16 | 01 98 | 8 | 03 | 07 64 | 8 | 11 | 00 49 |
| 100 | 08 | 13 | 06 19 | 9 | 01 | 09 82 | 9 | 10 | 00 54 |
| 200 | 17 | 07 | 00 38 | 18 | 03 | 07 64 | 19 | 00 | 01 08 |
| 300 | 26 | 00 | 06 57 | 27 | 05 | 05 46 | 28 | 10 | 01 63 |
| 400 | 34 | 14 | 00 77 | 36 | 07 | 03 27 | 38 | 00 | 02 17 |
| 500 | 43 | 07 | 06 96 | 45 | 09 | 01 09 | 47 | 10 | 02 71 |
| 600 | 52 | 01 | 01 15 | 54 | 10 | 10 91 | 57 | 00 | 03 25 |
| 700 | 60 | 14 | 07 34 | 63 | 12 | 08 73 | 66 | 10 | 03 80 |
| 800 | 69 | 08 | 01 53 | 72 | 14 | 06 55 | 76 | 00 | 04 34 |
| 900 | 78 | 01 | 07 73 | 81 | 16 | 04 37 | 85 | 10 | 04 89 |
| 1000 | 86 | 15 | 01 92 | 90 | 18 | 02 18 | 95 | 00 | 05 43 |

Pounds.

Rebate at 6 per Cent.

| | | 22 Months. | | | | 23 Months. | | | | 24 Mo |
|---|---|---|---|---|---|---|---|---|---|---|
| | | li. | sh. | d. | c. | li. | sh. | d. | c. | li. sh. d. |
| Shill. | 5 | | | 5 | 94 | | | 6 | 19 | 0 |
| | 10 | | | 11 | 89 | | 1 | 0 | 38 | 1 0 |
| | 15 | | 1 | 5 | 84 | | 1 | 6 | 57 | 1 1 |
| Pounds. | 1 | | 1 | 11 | 78 | | 2 | 0 | 75 | 2 |
| | 2 | | 3 | 11 | 56 | | 4 | 1 | 51 | 4 |
| | 3 | | 5 | 11 | 35 | | 6 | 2 | 26 | 6 |
| | 4 | | 7 | 11 | 13 | | 8 | 3 | 01 | 8 |
| | 5 | | 9 | 10 | 92 | | 10 | 3 | 77 | 10 |
| | 6 | | 11 | 10 | 70 | | 12 | 4 | 52 | 12 |
| | 7 | | 13 | 10 | 49 | | 14 | 5 | 27 | 15 |
| | 8 | | 15 | 10 | 27 | | 16 | 6 | 3 | 17 |
| | 9 | | 17 | 10 | 5 | | 18 | 6 | 78 | 19 |
| Pounds. | 10 | | 19 | 9 | 84 | 1 | 0 | 7 | 53 | 2 1 |
| | 20 | 1 | 19 | 7 | 67 | 2 | 1 | 3 | 6 | 2 2 |
| | 30 | 2 | 19 | 5 | 51 | 3 | 1 | 10 | 60 | 3 4 |
| | 40 | 3 | 19 | 3 | 35 | 4 | 2 | 6 | 13 | 4 5 |
| | 50 | 4 | 19 | 1 | 19 | 5 | 3 | 1 | 67 | 5 7 |
| | 60 | 5 | 18 | 11 | 3 | 6 | 3 | 9 | 20 | 6 8 |
| | 70 | 6 | 18 | 8 | 86 | 7 | 4 | 4 | 74 | 7 10 |
| | 80 | 7 | 18 | 6 | 70 | 8 | 5 | 0 | 27 | 8 11 |
| | 90 | 8 | 18 | 4 | 54 | 9 | 5 | 7 | 80 | 9 12 |
| | 100 | 9 | 10 | 2 | 38 | 10 | 6 | 3 | 34 | 10 14 |
| | 200 | 19 | 16 | 4 | 76 | 20 | 12 | 6 | 7 | 21 8 |
| | 300 | 29 | 14 | 7 | 14 | 30 | 17 | 10 | 1 | 32 2 |
| | 400 | 39 | 12 | 9 | 51 | 41 | 5 | 1 | 35 | 42 17 |
| | 500 | 49 | 10 | 11 | 89 | 51 | 11 | 4 | 68 | 53 11 |
| | 600 | 59 | 9 | 2 | 27 | 61 | 17 | 8 | 2 | 64 5 |
| | 700 | 69 | 8 | 4 | 65 | 72 | 3 | 11 | 36 | 75 0 |
| | 800 | 79 | 5 | 7 | 3 | 82 | 10 | 2 | 69 | 85 14 |
| | 900 | 89 | 5 | 9 | 41 | 92 | 16 | 6 | 3 | 96 8 |
| 1 | 000 | 99 | 1 | 11 | 78 | 103 | 2 | 9 | 36 | 107 2 |

*The use of these Tables.*

1. WHat is the rebate out of 500 pound due 6 months hence, to be paid at present, and so how much ready money will satisfie the said debt of 500 pound?

By the Table you shall finde that 14 pound, 11 shillings, 3 pence, and half a farthing, is to be abated.

| | *li.* | *sh.* | *d.* |
|---|---|---|---|
| So that, *the debt being* | 500. | 00. | 00 |
| *The rebatement to be substracted* | 14. | 11. | 3 |
| So there remains | 485, | 08. | 09 |

And so much ready money will satisfie the said debt.

II. If you cannot finde the whole debt in one line of the Tables, or if the debt be to be paid at two or three payments, then you must take it out of the Tables severally, and then adde them together.

As suppose *A* hath sold a Bargain to *B* of 1500 pound, to be paid at three six moneths, 500 pound a time: what is the value of it in ready money?

| | li, | sh. | d. |
|---|---|---|---|
| The debt is | 1500 | 00 | 00 |
| Rebate of 500l for six months | 14 | 11 | 05 |
| Rebate of 500l for 12 months | 28 | 06 | 00 |
| Rebate of 500l for 18 months. | 41 | 05 | 06 |
| The Sum of the rebates | 84 | 02 | 11 |
| which substracted from the whole debt, there remains | 1415 | 17 | 01 |

The money which must be paid at p
sent.

III. There is another kinde of Reb
ment by way of reducing divers time
payment all into one, which is many ti
used, but yet it is not altogether so exa
it should be,

*For Example.*

Suppose the said debt of 1500l. t
paid at three six months, what time will
whole debt be due to be paid altogether
The rules is thus: First, multiply
summes of money, by the times of their p
ment, and adde the several products
gether; thus,

| 500 pounds By 6 moneths. | 500 pounds by 12 months | 500 pounds by 18 months |
|---|---|---|
| is 3000 | is 6000 | 9000 |
| | | 6000 |
| Which three added together, | | 3000 |
| The summe of them all is | | 18000 |

And this product divided by the whole debt 1500 pound, the quotient will shew 12 moneths for the time of payment.

This falls out exactly, if you make your rebate according to the Tables of Interest.

*For Example.*

| The Interest of | l. sh. d. |
|---|---|
| 500l. for 6 moneths is | 15 00 0 |
| 500l. for 12 moneths is | 30 00 0 |
| 500l. for 18 moneths is | 45 00 0 |
| In all | 90 00 0 |
| And so also the Interest of 1500l. for 12 months is | 90 00 0 |

But here you may see the difference in reckoning these manner of payments, by the Tables of Interest, and by the Tables of rebate.

| By the one the rebate is | 90 00 0 |
|---|---|

| | |
|---|---|
| *By the other the rebate is but* | 84 03 0 |
| *So there is saved by this reckoning* | 05 17 0 |

Yet this rule of reckoning the time of payment will not be much out of the way, if you reckon the money by the Tables of rebate.

For if the said 1500 pound were to be paid at 12 months, then the worth of it in ready mony would appear to be but 1415 pound, 1 shilling, 10 pence, 2 farthings, whereas the true value of the debt in ready money was before found to be 1415 pound, 17 shillings, 1 farthing: by this means therefore the creditor will lose only 15 shillings one penny, 3 farthings more then he ought to rebate.

Yet this way of reducing of payments comes so near the exact truth, that I cannot prescribe a better way in general, to finde it out. But if any will be so punctual and think it worth their labour, let them try one by the other, & so finding the difference which here is 15 shillings; find out by the Tables of Interest, in how many dayes the 1500 pound will require 15 shillings Interest; and you shall find the neareſt time is 3 dayes. For the Interest of 1500 pound for 3 dayes is 14 shillings, 9 pence: these 3 dayes therefore being taken from the 12 months aforesaid, shews the true time due for the pay-

payment of the whole 1500 pound.

IV. If any will be so strict in their Rebatements, as to look after any time under a moneth; they may by the former Tables of Interest, finde out the Interest of their principal debt for the odde dayes, and adde that to the rebatement for the months, without much error.

But if they will be more exact, let them by the Tables of daily Interest, finde out the Interest of 100 pound for the time desired, and work by the former rule, according to the rule of proportion.

Thus, if you would know the rebate out of an hundred pound for 190 dayes.

The Interest for 190 dayes is 3 pound, 1200 parts. Therefore,

As 103 1200 to 100; so 100 to 96, 9744. which is 96 pound, 19 shillings 6 pence *ferè*.

And thus much for these Tables of Interest. All that I have said hitherto hath been about Interest either simple or compound, by which you may see the good use which may be made thereof, and how the abuse may be avoided and prevented.

And here I thought to have put an end to this little Book. But since there are many other things of a general concernment, and not impertinent to the former Discourse, I shall adde somewhat concerning a few of them, as briefly as I can.

# THE PURCHASERS PATERN:

## The Second Part.

Shewing
The Measuring of *Board*, *Land*, *Timber*, *Stone*, and the Gauging of *Cask*.

With many other Rules and Tables of daily use for most Men.

By *Henry Phillips*.

*London*, Printed by *E. Cotes*, for *Thomas Pierrepont*. 1667.

# To the Reader.

HE that hath any thing to do with Land or Houses, will have some occasion to have some knowledge in the Art of Measuring Land, Board, Timber, and such like; and therefore I thought good to adjoyn those Geometrical Observations, to the former Discourse: whereby those, whose Genius leads them any thing this way, may attain some good knowledge therein, and receive much profit thereby.

The other things likewise are of such general concernment, and frequent use, that they will be profitable to most: and therefore though they are more commonly written of, yet I hope you will finde somewhat therein worth your reviews and acceptance.

# Geometrical Obſervations.

*Of meaſure, which conſiſts onely in length.*

THree Barley Corns make one inch.
Twelve Inches make one foot.
Three foot make one yard; which is the common Engliſh meaſure, wherewith moſt Engliſh Commodities are meaſured. As for the Ell, though it be commonly uſed among us, yet the Statute takes little or no notice of it, it being a forreign meaſure, and uſed about Forreign Commodities, as Silks and French Linnens. The length of the Ell is five quarters of our Yard; ſo that five Yards are four Ells.

Theſe are the meaſures, by which all ſmall quantities are meaſured; but for meaſuring of Land they make uſe of Poles or Rods.

16 *foot and an half make a Pole or Perch.*
40 *Poles make a Furlong.*
3 *Furlongs make a Mile.*

So that in a meaſured Mile, there are,

*Poles*

*Poles* 320
*Yards* 1760
*Feet* 5280
*Inches* 63360
*Barley-Corns* 190080

But the miles commonly accounted from one place to another are more, unless within 20 miles round off *London*.

*To measure things which have length and breadth, as Board, Glass, Pavements, Tyling, Wainscot, and such like.*

THese things are all measured after the same way, only there is a difference in the measure by which they are measured. For Board and Glass are measured by the foot; Wainscot, Pavements, *&c.* by the Yard.

Now in measuring any of these, as Inch, Foot, or Yard, is not only so much in length, but so much in breadth too, that is, so much square; or if it lacks of it one way, it must be made up the other way. So that upon this account there is

9 *square feet in one yard.*
144 *square inches in one foot.*
72 *square inches in half a foot.*
36 *square inches in a quarter of a foot.*

Now in the measuring of any of these things

things, you must consider what form or fashion it is of; and accordingly there are several rules.

First, for Boards, they are usually cut out in long squares. And to measure such, you must first take the breadth thereof in Inches, and likewise the length thereof in Inches; and multiply them one by the other; so you shall have the content thereof in inches; then to know how many feet it is, divide this number by 144, the square inches in one foot, and the quotient will shew the number of Feet; and if any thing remain, it is so many square Inches, which you may value by the former Table.

| | |
|---|---|
| 10 | 60 |

*Thus for Example.* Suppose a Board to be 10 Inches broad, and 5 foot, or 60 inches long; Multiply 60 by 10, it makes 600, which divided by 144, the quotient will be 4, and there remains 24. So that the board is four feet, and two thirds of one quarter of a foot.

This is the usual form of Boards, only some-

ſometimes they are a little narrower at one end than at the other; in this caſe you may take the breadth in the middle of the board and then do as before,

But becauſe moſt men have not skill enough to divide and multiply; therefore they make uſe of tables and lines ſet upon rulers to ſhew any breadth will make a foot; and ſo by their Compaſſes or Ruler, they try how many times the ſaid quantity is contained in the length of that Board, and reckon it to be ſo many foot long. This way is ancient, and is much uſed; and *I* no wayes find fault therewith: and the Tables hereof are ſo common, that I ſhall not need to ſet them down. Only for variety, and in conformity to ſome following concluſions, I ſhall preſent you with this new Table of Board-meaſure, which may be uſed as it ſtands in the Book, or drawn into a line and ſet upon a Ruler.

## A Table of Board Measure.

| Breadth of the Board in Inches. | F. Parts. The quantity of one foot thereof in length. | Breadth of the Board in Inches. | F. Parts. The quantity of one foot thereof in length. |
|---|---|---|---|
| 1 | 0,083 | 19 | 1,583 |
| 2 | 0,167 | 20 | 1,667 |
| 3 | 0,250 | 21 | 1,750 |
| 4 | 0,333 | 22 | 1,833 |
| 5 | 0,417 | 23 | 1,917 |
| 6 | 0,500 | 24 | 2,000 |
| 7 | 0,583 | 25 | 2,083 |
| 8 | 0,667 | 26 | 2,167 |
| 9 | 0,750 | 27 | 2,250 |
| 10 | 0,833 | 28 | 2,333 |
| 11 | 0,917 | 29 | 2,417 |
| 12 | 1,000 | 30 | 2,500 |
| 13 | 1,083 | 31 | 2,583 |
| 14 | 1,167 | 32 | 2,667 |
| 15 | 1,250 | 33 | 2,750 |
| 16 | 1,333 | 34 | 2,833 |
| 17 | 1,417 | 35 | 2,917 |
| 18 | 1,500 | 36 | 3,000 |

This Table shews the proportion which one foot in the length, having any number of Inches in the breadth hath to one foot of board measure which should contain 144 square Inches, as aforesaid.

It is thus made by this Rule,

*As 12 Inches in breadth, and one foot in length,*

*Is to one foot of board measure;*

*So any other number of Inches in breadth multiplied by one foot, or 12 Inches in length.*

*To the proportional part thereof to a foot.*

*For Example*: If you would find the proportion which one foot length of 10 Inches broad, hath to a foot. Multiply this 10 Inches by 12, it makes 120 Then,

As 144 to 1 foot, so 120 to 0, 833.

That is somewhat above three quarters of a foot, being 833 thousand parts of a foot.

But now for the use of this Table.

Having measured the breadth of your board, finde it out in the Table, and take the number you finde there, and multiply it by the feet which are contained in the length of the board; so cutting off the three last figures, you shall have the number of feet, and the figures cut off will shew the parts of a foot.

Thus in the former example, the Board being 10 inches broad, and 5 feet long.

| | |
|---|---|
| *The number for* 10 *Inches broad is* | 0,833 |
| *Which multiplied by* 5 | 05 |
| *Makes,* | 4,165 |

That is, four feet, and two thirds of a quarter, as before.

If you think this too much labour you may leave out the last Figure in the Table, and so work by 100 parts of a foot, but the other will be more exact.

And thus much for the usual forms of Boards; as for any other forms of Pavements, Glass, or Wainscot, you may see how they are to be measured in the following examples of Land, which I account the more useful and Gentile employment, and therefore shall speak a little more largely of it.

---

*How to measure any piece of Land.*

First, in general, Land is measured by a Pole, Perch, or Rod, which is usually 16 Feet, and an half long; yet in some places they use a Pole of 18 feet especially for Wood Lands.

Now according to the Statute, 4 Poles in

in breadth, and 40 poles in length make an Acre. So that

| | | |
|---|---|---|
| *One Acre contains* | 160 | *square Poles.* |
| *Half an Acre contains* | 80 | |
| *A quarter, or* 1 *Rood* | 40 | |

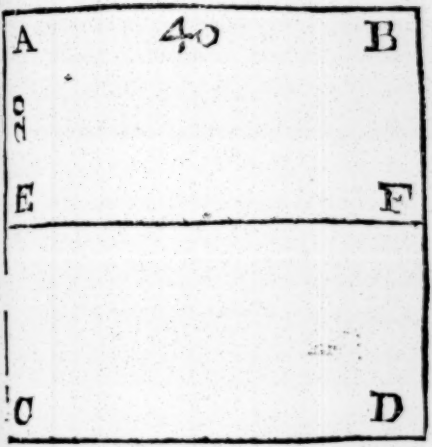
Some use Chains of four or more Poles long, and divide them, as their fancy pleaseth; I shall only shew you how to do it by Poles.

But now since every Field and parcel of Land hath almost a different form: I shall shew you first, how to measure some of the general and common forms; and then how to reduce others thereunto.

## I. *How to measure a square piece of Land.*

THis is one of the most common forms, and most easily to be understood. The measuring hereof, is as I shewed before, in the board. For whether it be a long square, as that was, or that the sides be every way equal, as this is, multiply one of the sides by another of the sides next unto it, (not opposite to it) and the product shews the content in Poles; which divided by 160, will give the content in Acres.

Thus, let the square *A B C D* represent a piece of Land, being 40 Poles square each way. This 40 multiplied by 40, make 1600 and




and this divided by 160, yields 103. which shews the piece of Land is just 10 Acres.

But now if this square were longer one way then another; as suppose the upper half of it, *ABEF* Here now *A B* is 40 Poles, but *A E* is but 20; these two multiplied, make 800; and this divided by 160, yields 5 Acres

But here note, that every four-sided piece of Land is not square, neither can thus be measured; therefore such four sided irregular figures may best be reduced into two Triangles, and so measured, as in the next.

II. To

## II, *To measure a Triangular, or three sid piece of Land.*

THough there are few parcels of La lie in this form, yet this is the m common form which is measured; bec almost all parcels of Land must be redu into these Triangles before they can measured.

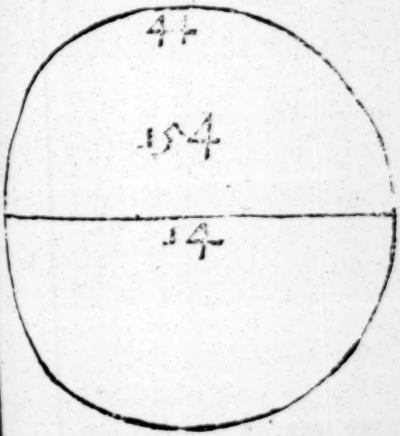
In the measuring of all sorts of Triang the rule is this.

Observe which is the longest side, a then measure how many Poles it is fr the Angle opposed to that side by the nea est way you can, (which is perpendicul ly) to that long side; as is represented the pricked line in the Triangle follow Then multiply the half of this line by whole long line; or the half of the l line by the whole of this line, as you s see most convenient, and so you shall ha the content of the Triangle in poles, wh you may reduce into Acres, as before.

Thus, suppose the longest side of the Triangle to be 60 Poles; and the pricked, or perpendicular line 20 Poles. You may multiply either 60 by 10, or 20 by 30, the product is 600, which divided by 160, shews the content to be three Acres, and three Roods, or Quarters.

III. *To measure a Circular piece of Land.*

THe rule, for the measuring of a Circular piece of Land is this, Multiply half the Compass by half the Diameter. Note, the Diameter is a line drawn cross the midst of the Circle.



Thus the Diameter being 14 Poles, the compass 44 : the half of both these 7 and 22, which multiplied together, yield 154 Poles, which lacks only six Poles of an Acre.

Now to this purpose it may be sometimes necessary to know the proportion that there is between the Diameter, and the circumference of a Circle. I confess though the ordinary proportion of 7 to 22 is somewhat too much, yet it is but about 1 in 300, which will breed no great difference in these operations.

So that if you know the Diameter you would finde the circumference.

*As 7 to 22, so the Diameter to the Circumference.*

Or if you know the Circumference you would finde the Diameter.

*As 22 to 7, so the Circumference to the Diameter.*

If you will be more exact, reckon,

*As 1 to 3, 1416 : so the Diameter to the Circumference.*

*And as 1, to 0, 3183 : so is the Circumference to the Diameter.*

And thus when any piece of Land is laid out in this form, you may spare some labour by measuring only the Diameter, or the Circumference, and finding out the other by these rules aforesaid.

The half Circle, and quarter-Circle, or any other part of a Circle more or less, which hath one point or angle at the center of the circle, may be measured by the former rule, *viz.* half the compass, or arching side multiplied by the semidiameter, gives the content thereof.

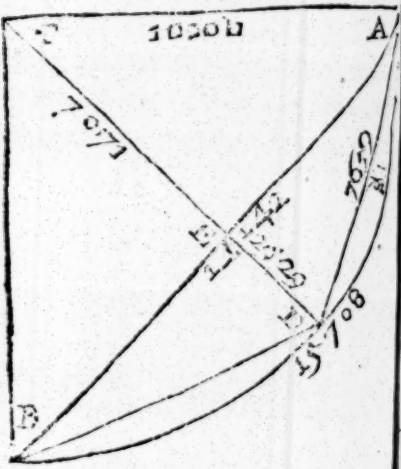
But other Sections are very hard and troublesome, and scarce to be found out, without knowing the content of the whole Circle or Semicircle; and thereby the greater part thereof; and so the remainer is the lesser Section.

Some to avoid this trouble, measure the perpendicular line, (or the part of the Diameter) by the half of the Arch. But this gives the content very much too little.

*For Example.*

Suppose in the Quadrant ADBC, the Radius or Semidiameter being 10000; and

| | |
|---|---|
| the Arch A D B | 15708 |
| *Half this compass* | 7854 |
| *Multiplied by the Radius,* | 10000 |
| *Yields for the content of the whole Quadrant.* | 7854000 |




Again in the plain Triangle ABC,

| | |
|---|---|
| *The base* AB *is* | 14 |
| *The half whereof is* | 7 |
| *Which multiplied by the Perpendicular* EC | 7 |
| *Yields for the content thereof* | 4999 |
| *Which should be* | 5000 |

But the numbers 7071 being not perfect numbers, cause this small difference, which is not to be regarded.

| | |
|---|---|
| *Now the content of the whole quadrant being* | 78540000 |
| *And the content of the Triangle* A B C, *a part thereof being substracted* | 50000000 |
| *Remains for the Section* ADBE | 28540000 |

This being the true content of the said Section, if you try the other Rule by it, you shall finde it much too little.

| | |
|---|---|
| *For the half of the arch* ADB *is* | 7854 |
| *Which multiplied by the Perpendicular* DE | 2929 |
| *Yields only* | 23004366 |
| *Whereas it should be* | 28540000 |

But you may save much of the former trouble, and will come more near the truth, if you take the Chord A B, and the perpendicular DE, and multiply the whole of the one by two thirds of the other. Thus,

| | |
|---|---|
| *The Chord* A B *being* | 14142 |
| *Multiplied by two thirds of* 2929 | 1953 |
| *Yields* | 27619326 |

*Which indeed should be* 28540000

*But yet it is much nearer than the number found the other way, viz.* 23004398

And if the Chord be less, this way will be more exact. And therefore if you will be so curious; you may first find the content of the plain Triangle ADBE in the Section, and then the content of the two little Sections, AD and DB.

*Thus the content of the plain Triangle* ADBE *will be found to be* 20716398

And the content of the Section AD will thus be found.

*The Chord* A D *is* 76[illegible]
*The Perpendicular* 8[illegible]
*The two thirds thereof* 5[illegible]
*By which multiplying the Chord,* 76[illegible]

*It yields* 389078[illegible]

For the content of the Section A D.

Now the Section D E is like to the Section A D in every respect; therefore,

This

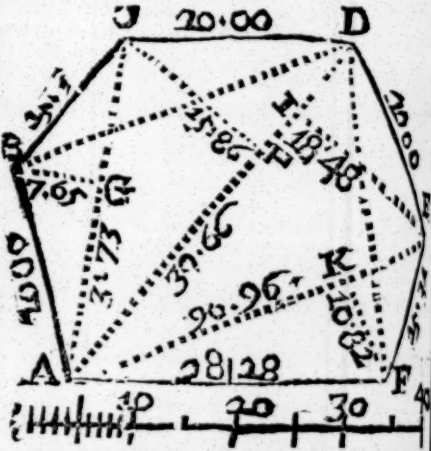
| | |
|---|---|
| *This number doubled* | 3890772 |
| *Is the content of both the sections* | 7781544 |
| *which added to the Trian.* ADE | 2071099 |
| *Makes the content of the whole Section* ADBE, | 28492503 |
| *whereas it should* | 28540000 |
| So that it wants only | 00047497 |

Which though it seems much in these great numbers, yet will scarce be considerable in smaller numbers, and in lesser Sections will come more near to the exact truth

## *To measure any piece of Land.*

HItherto you have seen how to measure any parcel or ground which lies in any one of these single forms; but very few parcels of ground do so; and therefore before you can measure it, you must reduce it into some of these foresaid figures. Now the most common and best form into which you may reduce any piece of ground, is to lay it out in several Triangles: and this you may do either in the field it self, (if it be not very great) or else you must draw a plot of the field, and so draw several lines overthwart it; which may divide it into as few Triangles (taking in the whole) as possible may be: and then finding the contents of

These several Triangles, and adde them altogether, and so you shall have the content of the whole field.




Thus in this figure which represents a piece of ground, having six unequal sides, you may reduce it into four Triangles, by drawing the three lines, *AC*, *AD*, *AE*, from the Angle at A.

Now to finde the content of this field; first, in the Triangle *A B C*, you must measure the longest line thereof *A C*, which is 31 Poles, 73 hundred parts: then measure the perpendicular line *B G*, which is 7 Poles, 65 parts. Now multiply the one of these numbers by the half of the other, viz.

31. 73.

31. 73. by 3. 82. and so you shall finde the content of this Triangle to be 121 poles, 21 parts.

Secondly, in the Triangle, *A C D.*

| | *poles.* | *parts.* |
|---|---|---|
| *The length of the line* A D. *is* | 39 | 66 |
| *Length of the perpend* C H, *is* | 15 | 86 |
| *So the content thereof is* | 314 | 50 |

Thirdly, in the Triangle, *A D E.*

| | *poles.* | *parts.* |
|---|---|---|
| *The length of the line* A D *is* | 39 | 66 |
| *Length of the perpend.* E I *is* | 18 | 48 |
| *So the content thereof is* | 366 | 45 |

Fourthly, in the Triangle *AEF.*

| | *poles.* | *parts.* |
|---|---|---|
| *The length of the line* AE *is* | 36 | 96 |
| *Length of the Perpend.* F K *is* | 10 | 82 |
| *So the content thereof is* | 199 | 95 |

Now if you adde the content of these four Triangles altogether, *viz.*

| | *poles* | *parts.* |
|---|---|---|
| 1 *The Triangle* ABC | 121 | 21 |
| 2 *The Triangle* ACD | 314 | 50 |
| 3 *The Triangle* ADE | 366 | 46 |
| 4 *The Triangle* AEF | 199 | 95 |
| *The Sum of them is* | 1002 | 12 |

Which is the content of the whole field; the which if you divide by 160, to bring it into acres, shews 6 acres, 1 rood, 2 poles, and 12 parts.

The

The moſt difficult task in this work is to finde the true length of the Perpendiculars, eſpecially if you meaſure it in the field it ſelf, which muſt alwayes be taken very exactly.

To which purpoſe, there will be need of two perſons to help one another.

Thus, if you would find the length of the perpendicular *B G*, in the Triangle *A B C*. Let one party ſtand at the angle *A*, and let the other go from *A* toward *C*, as directly as he can. Now he that ſtands at the angle *A* will plainly ſee whether the other ſwerves to the right or left never ſo little, and may direct him; this muſt be his part in the work. The other man that walks from *A* towards *B*, muſt carefully obſerve when he comes juſt againſt the angle B, that it may be juſt upon his ſide, which will be when he is at G, from whence meaſuring up to B, he ſhall have the true length of the line G B.

But if you have a plot of the field in paper, then you need only take your Compaſſes, and ſetting one foot in B, open the other, ſo that it may touch the line *A C* in the neareſt place thereof, which is at G, then meaſure this diſtance upon your Scale of Poles, and ſo you ſhall have the length thereof.

By this you may perceive, that if you

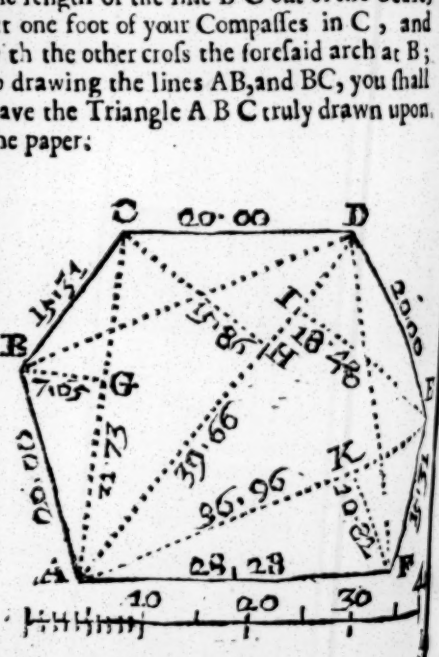
draw a true plot of the field in paper, it will be a great help to the measuring thereof. This may be easily done by many Instruments, and those which have skill to use them. Or if a man have but a Ruler with sights, and some convenient device to serve in stead of a stool or table in the field, that so he may lay a sheet of paper thereon, he may draw the foresaid lines to the several angles of the field; and so measuring the length of them, prick them down with his compasses; and drawing the boundary lines, he shall have the true plot of the field.

If this also be wanting, yet with a little more labour in measuring, you may thus perform it with your Ruler and Compasses.

First, being at the Angle A, measure the side AB, noting it down in your Book, as also the point of the Compass, which it tends to, which for this purpose you may guess at near enough, if you have any skill therein, or else make use of any Sun-Dial with a Needle and Compass. Then likewise measure the Line B C, noting the length thereof, and the point of the Compass is tends nearest to. Thirdly, measure from C to A, and thus you have the three sides of the Triangle ABC.

Having these three sides, you may with your Ruler and a pair of Compasses, thus set:

ct out this Triangle in any paper. First, drawing the line AC, and setting off the length thereof cut of any Scale of equal parts, make two points at the end thereof at A and C. Then taking the length of the line AB out of the scale, set one foot of your Compasses in A, and with the other make a little arch at B. And then taking the length of the line B C out of the Scale, set one foot of your Compasses in C, and with the other cross the foresaid arch at B; so drawing the lines AB, and BC, you shall have the Triangle A B C truly drawn upon the paper.



In like manner, measuring the side CD, and the breadth of the field from A to D; and setting off the length of these two lines from the points A and C, as before; so you shall have the one half of the field truly drawn.

Then measuring the side DE, and the breadth AE, from the points A and D you may make the angle at E, and so set off another part of the field contained in the triangle ADE.

Lastly, measure the sides of the field EF, and AF, and therewith from the points A and E, make the angle at F.

Thus you have all the angles of the field, so that by drawing the lines from angle to angle, you have the true form thereof, and the lines which you measure cross the field, will be of great use in casting up the content thereof, being the bases of four Triangles; so that you have nothing to measure but the perpendiculars, which you may find out by your Scale, or now see how to measure them more exactly in the field it self.

The fittest Instrument used for this purpose is the plain Table; which, for a shift, you may imitate with any ruler with sights upon it, placing this Instrument at one corner of the field, as at A, you must turn the Ruler to the several angles B, C, D, E, F, and

and draw the lines AB, AC, AD, AE, AF; then measure those distances, and setting off the length thereof by your Scale and Compasses; so you shall have the exact proportion of the field.

Or if you think this measuring too much labour, you may do thus, having taken the proportion of the angles at A, as before, you need measure only any one of the lines (but the most opposite to it is the best) as A D; then set up your Instrument at D, and set off the length off the line AD 33 Poles, 66 parts out of your Scale from A to D, make this D your Center-point, and so turning your Instrument, that the line DA may point directly to the angle at A, move your Ruler about to the other angles C, B, F, E, and draw the lines D C, D B, D F, D E, and where these lines cross the forsaid lines, there lies the true place and posture of these bounds of the field. And if you have a care to draw these lines exactly, you may by your Scale and Compasses measure the length of any of these lines, almost as exactly as in the field it self.

And thus also at two stations, you may draw the plot of any large piece of ground, or the platform of an whole Countrey, with the true distances of all the Towns and Villages therein, which you can see from both these places.

But

But many times it falls out, that in measuring great places, or Woods, or Hilly Grounds, you can see but few of these Angles at once. In this case, you must go round about the Wood or Field, measuring the sides thereof from angle to angle, and by your Instrument very diligently observing the quantity or proportion of these angles: So you shall have the true Symmetry of the field upon your paper, which you may divide into Triangles, and so finde the true quantity thereof, as before.

But these things require a larger Discourse, I have only given you a taste; if you please, you may be better instructed by those who have written at large and expresly hereof, as Mr. *Rathborn*, Mr. *Diggs*, and Mr. *Leybourn* in his *Compleat Surveyor*.

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## *Of the measuring of Solid Bodies.*

IN the measuring of Timber, Stone, and such like solid Bodies, there must be respect had not only to the breadth and length, but also to the thickness thereof. And there are many common rules used in the

the measuring of these things, which deserve some corrections.

First, herein you must know, that a foot of timber is a foot square every way, viz. in length, breadth, and thickness: so that it is twelve times more then a foot of Board; a foot of Board being but 144 inches, but a foot of timber is 1728 Inches; and every Inch is square like a Die, and so the foot also supposed to be; or if it want of this, either in breadth, or in thickness, it must have it in length: so that in what form soever it be, you must reckon thus:

1728 *square Inches make one foot.*
864 *square Inches make half a Foot.*
432 *square Inches make a quarter of a Foot.*

The most common shape which timber is brought into before it be measured is a long Square, having equal sides; for trees growing, for the most part, round, by cutting off from each side alike, they come readily into this square.

Now to finde the content of such a piece of squared Timber, you must multiply the Inches, of the breadth by the Inches of the thickness, and then multiply this product by the Inches of the length; so you shall have the whole solid content in Inches, which if you divide by 1728, the Inches a-

one foot; the quotient will shew you how many feet are in the piece of timber.

But this way, though very exact, may seem somewhat too tedious, and therefore men, who have daily use hereof, have tables and lines upon their Rulers; by which having measured the square of the tree, they know how much in length will make a foot of timber; and so taking out this with their Compasses, they measure how many times that length is found in the length of the piece of timber; and so conclude it to be so many feet.

This way, as I shall not speak against it, so it is so common, that I need not set down the tables thereof; but shall present you with this new Table, which you will finde somewhat more ready and exact, especially if you use your pen.

A Table shewing the true quantity of one foot length, of any true squared piece of Timber for Inches and half Inches.

| Inches Square. | F. pts. | | F. pts. | | Fpts. |
|---|---|---|---|---|---|
| | 0,002 | | 1,085 | | 4,216 |
| 1 | 0,007 | 13 | 1,174 | 25 | 4,340 |
| | 0,016 | | 1,266 | | 4,513 |
| 2 | 0,028 | 14 | 1,361 | 26 | 4,694 |
| | 0,043 | | 1,460 | | 4,817 |
| 3 | 0,062 | 15 | 1,562 | 27 | 5,065 |
| | 0,085 | | 1,668 | | 5,250 |
| 4 | 0,111 | 16 | 1,778 | 28 | 5,444 |
| | 0,140 | | 1,891 | | 5,670 |
| 5 | 0,174 | 17 | 2,007 | 29 | 5,840 |
| | 0,210 | | 2,127 | | 6,048 |
| 6 | 0,250 | 18 | 2,250 | 30 | 6,250 |
| | 0,293 | | 2,377 | | 6,460 |
| 7 | 0,340 | 19 | 2,507 | 31 | 6,675 |
| | 0,390 | | 2,641 | | 6,890 |
| 8 | 0,444 | 20 | 2,778 | 32 | 7,111 |
| | 0,502 | | 2,918 | | 7,333 |
| 9 | 0,562 | 21 | 3,062 | 33 | 7,562 |
| | 0,627 | | 3,210 | | 7,787 |
| 10 | 0,694 | 22 | 3,361 | 34 | 8,018 |
| | 0,765 | | 3,516 | | 8,263 |
| 11 | 0,840 | 23 | 3,673 | 35 | 8,507 |
| | 0,919 | | 3,835 | | 8,750 |
| 12 | 1,000 | 24 | 4,000 | 36 | 9,000 |

*The Demonstration of this Table.*

AS the common Tables of Timber-measure, shew how many inches and parts, make a foot of timber, the timber being any number of inches square; so this shews you by the square of the timber-log in inches, how many feet, or 1000 parts of a foot are contained in one foot length thereof.

Now because some may desire to enlarge this table, that so it may shew not only for the squares of inches and half inches, but the quarters, or tenth parts of Inches: (though these may be well enough known by the proportion between the Inches and half Inches) yet I shall shew you the ground-work of the table, and so you may enlarge it at pleasure.

A foot of timber, you all know, ought to be 12 inches square every way, *viz.* 12 inches in breadth, 12 inches in thickness, and 12 inches in length. Therefore this proportion will follow.

*If the square of* 12 *Inches which is* 144
*Require* 1 *foot in length, which is parts* 100
*What shall any other Square, viz. the Square of* 6 *?* } *which is* 36
*The answer will be* 0,25

---

*The use of the Table of Timber measure.*

HAving the true square of any timber-log in Inches, and the length thereof in feet, to know the content thereof in feet.

Take the number answering to the square of Inches out of the Table, and multiply it by the length in feet.

Thus, a piece of timber 18 Inches square, and 25 foot long.

*The number answering to* 12 *Inches square is* 2,25
*Which multiplied by* 25 *the length* 25

11 | 25
45 | 00

*Yields* 56|250

*Viz.* 56 feet, and one quarter.

Here may seem some difficulty in finding the product of these mixt numbers, but you may see how to do it in *pag.* 47.

If you think this somewhat too tedious, you may leave out the last figures of the number, and work only by 100 parts of a foot.

Now for the more readiness, and also for the more exactness, you may project this table of timber measure into a line upon your Ruler, in such a manner, that it shall serve better than the former Table.

But because the foresaid table falls out in odde parts, which will be very troublesome to divide; therefore it will be worth the while, to finde how many Inches and parts any certain number of the parts of this line will require, which you may thus finde, and so inlarge the following table as you please.

Take the number 144 for 1000 parts, of 12 Inches, as before. and multiply it by the parts you desire, and extract the square Root out of the product: note, if it fall out in equal parts, and some ciphers to it, that so you may have the fraction in a thousand parts at least.

*Thus for*

| *Parts.* | *Square.* | *Roots.* |
|---|---|---|
| 0001 | 000144 | 0.379 |
| 0010 | 00144 | 1.200 |
| 0100 | 0144 | 3.795 |
| 1000 | 144 | 12.000 |

Having

Having thus made the Table, or make use of this already made, divide your rule first into Inches, and then each Inch into or 1000 parts, and out of the Table you shall readily set off the parts of the line measure; which being done handsome and truly, will shew you the quantity of timber in one foot length of any number of inches square, to the tenth or 100th of an inch, and to the 1000th. part of an inch, so that having the line, you will have no need of the former Table.

This you may see more plainly how to perform, by the Gauging line, which I have drawn after this sort in its following place.

You may also draw the like line for Board measure, only by dividing each foot of your Ruler into 100, or 1000 parts.

Parts of the Line of Timber Measure.

1 2 3 4 5 6 7 8 9 10 20 30 40 50 60 70 80 90 100 200 300

## A Table for the Division of the Line of Timber-Measure.

| In Pts | | In Parts | | In Parts | |
|---|---|---|---|---|---|
| 1 | 0,397 | 400 | 7,589 | 2500 | 18,974 |
| 2 | 0,537 | 500 | 8,486 | 2600 | 19,349 |
| 3 | 0,657 | 600 | 9,295 | 2700 | 19,718 |
| 4 | 0,759 | 700 | 10,040 | 2800 | 20,080 |
| 5 | 0,849 | 800 | 10,734 | 2900 | 20,435 |
| 6 | 0,929 | 900 | 11,384 | 3000 | 20,785 |
| 7 | 1,004 | 1000 | 12,000 | 3500 | 22,450 |
| 8 | 1,073 | 1100 | 12,586 | 4000 | 24,000 |
| 9 | 1,138 | 1200 | 13,145 | 4500 | 25,456 |
| 10 | 1,200 | 1300 | 13,682 | 5000 | 26,833 |
| 20 | 1,697 | 1400 | 14,198 | 5500 | 28,143 |
| 30 | 2,078 | 1500 | 14,697 | 6000 | 29,393 |
| 40 | 2,400 | 1600 | 15,179 | 6500 | 30,594 |
| 50 | 2,683 | 1700 | 15,646 | 7000 | 31,748 |
| 60 | 2,939 | 1800 | 16,100 | 7500 | 32,863 |
| 70 | 3,175 | 1900 | 16,541 | 8000 | 33,941 |
| 80 | 3,394 | 2000 | 16,971 | 8500 | 34,986 |
| 90 | 4,000 | 2100 | 17,390 | 9000 | 36,000 |
| 100 | 4,795 | 2200 | 17,799 | 9500 | 36,986 |
| 200 | 5,367 | 2300 | 18,199 | 10000 | 37,948 |
| 300 | 6,573 | 2400 | 18,500 | | |

Parts of the Line of Timber-Measure.

Now the use of this line being set upon your Ruler, will be very ready. For measuring the side of any square piece of Timber, you need never look how many inches square it is, but the line it self, counted from the right end thereof, will give you the number, which you must multiply by the length of the piece of Timber, measured in feet and hundred parts.

Thus, as before if you finde the side of a piece of Timber to reach to 2 25. in the line, and the length thereof to be 25 foot, the content thereof is 56 feet and 25 parts, or a quarter of a foot.

*To measure Timber, which is not square exactly.*

THough this be the common form of Timber, after the first hewing, yet many times by some accident, or by the sawing, there are many pieces of Timber thicker one way than another.

Now in this case it is usual with some men to adde the broader and the narrower sides together, and so to take the half thereof for the true square.

But this must not alwayes be so slightly over, lest you run into great errour. For though the errour will be little, where the difference between the sides is

much

much; yet the greater that difference is, the greater will be the errour.

*For Example.*

Let the sides of the timber be 10 inches, & 11 inches; these two added together, make 21, the half whereof is 11; but yet this is not the true square thereof: for 11 times 11 is 121; whereas 10 times 12 is 120, which is the true Area of the said square. Yet here the difference being but one inch in 120, may seem somewhat tolerable.

But now let the sides of the Timber be 12 inches one way, and 6 the other way: these two added together make 18, and the half thereof is 9. Now the square of 9 is 81, but the true square of the Timber is found by multiplying 12 by 6, so the Area is 72. Here you see the errour will be intolerable. And it is so much the more unconscionable, because it gives the buyer so much less than his due.

Mr. *Bedwel* hath framed a very ingenious Ruler for this purpose, if it be carefully made.

But the best way is to multiply the two sides, and to finde the true Area of the plain; and then by this Table, which you may also project into a line upon your Ruler find out the proportion of a foot, and so multiply it by the length in feet as before.

A Table shewing the solid Conten
of one foot length, of any piec
of Timber, according to the Area,
or superficial Content, taken a
the end thereof.

| The Inches of the Area. | Feet | Parts. | | Feet | Parts. |
|---|---|---|---|---|---|
| 1 | 0 | 007 | 200 | 1 | 38 |
| 2 | 0 | 014 | 300 | 2 | 08 |
| 3 | 0 | 021 | 400 | 2 | 77 |
| 4 | 0 | 028 | 500 | 3 | 47 |
| 5 | 0 | 035 | 600 | 4 | 16 |
| 6 | 0 | 042 | 700 | 4 | 86 |
| 7 | 0 | 049 | 800 | 5 | 55 |
| 8 | 0 | 056 | 900 | 6 | 25 |
| 9 | 0 | 062 | 1000 | 6 | 94 |
| 100 | 0 | 069 | 2000 | 13 | 88 |
| 200 | 1 | 39 | 3000 | 20 | 83 |
| 300 | 2 | 08 | 4000 | 27 | 77 |
| 400 | 2 | 78 | 5000 | 34 | 72 |
| 500 | 3 | 47 | 6000 | 41 | 66 |
| 600 | 4 | 17 | 7000 | 48 | 61 |
| 700 | 4 | 85 | 8000 | 55 | 55 |
| 800 | 5 | 56 | 9000 | 62 | 50 |
| 900 | 6 | 25 | 10000 | 69 | 44 |
| 1000 | 6 | 94 | 20000 | 138 | 88 |

Likewise, if your timber log have any other than a square form, whether it be regular or irregular, you must finde the Area thereof, and so you shall have the quantity of one foot length thereof by this Table.

| | | |
|---|---|---|
| Thus the *Area* being | 400 *Inches.* | |
| | *foot* | *parts* |
| The quantity of one foot by the *Table* is | 2 | 778 |
| This multiplyed by the length | 30 *feet* | 30 |
| Shews the content | | 83,340 |

## *To measure round Timber.*

THe way commonly used is to gird these round pieces of timber about with a string, and so doubling the string, to take the fourth part thereof for true square.

*As for Example*

If the compass of the tree be 48 Inches, they reckon 12 Inches for the true square thereof.

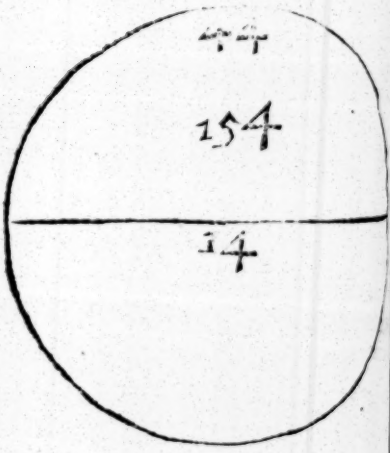
But this is very false, as you may see by this little Circle, casting it up after the common way.

The Diameter of the Circle is 14 inches, the compass 44 inches. This is, according to the rule,

*As 7 to 22.*

*So the Diameter to the Compass.*

Then for the Content of this Circle, you multiply half of the compass, which 22, by half of the diameter which is 7; the true content will be 154 inches.




Whereas if you had taken a quarter the compass, which is 11, for the square root of the circle; this multiplied in it self would yield but 121 Inches; which wants 33 Inches of the true content: so there would be lost above a fifth part thereof. And this

there will be in measuring any other round timber, by this rule, of what compass soever it be, somewhat above a fifth part thereof will be given away.

All that can be said in the defence of this custom is, that though most trees grow round, yet they must be hewed square, before they be fit timber for any use almost; and so this advantage in the measure may very well be allowed, for that which goes to waste in the chips being good for nothing but the fire.

And in my minde, though Carpenters think not of this excuse, but take this rule for an absolute truth; yet this I suppose, was the first occasion of this rule, which may stand with some good reason. For if you consider the former circle, the compass being 44 Inches, the inscribed square will be scarce 10 inches, as appears by this proportion, which you may use for any other.

*As 1 to 0,225*
*So the Compass 44 Inches.*
*To the inscribed square 9 inches, 900 parts.*

This is the greatest square which such a round piece of Timber can be hewen to, and this multiplied in it self, yields 98 Inches; one parts for the Area thereof. Now if you adde these two Areas together, *viz.*

*The Area of the inscribed square*
*And the full Area of the Circle*
*The sum thereof will be*
*And the middle or mean of thereof*
*And the content by this Rule was*

So that this gives an indifferent allowance between the buyer and seller; it being thus measured, neither to the full extent because of the waste: neither according to the exact square thereof, because that which is cut off, though it be not so good as the other, yet it may be good for somewhat.

But yet for all this, it is fit that the true content of the timber, let it be in what form soever, should be exactly known, and this is that which the measure ought to perform. As for the goodness of the timber, and the waste thereof, men must consider that in the price of the Foot or Tun; and so I believe they do: and therefore being allowed for the waste in the price thereof, there is no reason but they should pay for the full measure which they have, and not have any allowance in that also.

But many desire to buy timber round and will give as great a price for it as for square timber, because of the allowance which they take to themselves by the false measuring of it.

For first, they compass the tree, and divide the line into three parts, casting away one third part for the waste of the bark and rinde: then the other two parts of the line they divide into four parts, and so take one quarter thereof for the true square. Thus in the foresaid tree, whose compass was 28 Inches, a third thereof, 16 inches allowed for waste, there remains but 32, and then a quarter of this is but 8 Inches, whereas you see before, this tree will make a perfect square of almost ten Inches, and all the other which is cut off will not be quite lost, so that they will have at least the one half of the timber by this way of allowance and false measure.

Therefore by the way you may take notice of the different value which there ought to be, between good clear timber perfectly squared, and that which is not.

The difference between the content of the circle, and the square which may be wrought out of it, as you may see before, is above one third part.

But, because all this, specially in great trees, need not go to chips and waste; you may well in such large round timber, reckon a fifth part for waste, and so the price of five feet thereof to be equal to four feet of square timber; and in lesser pieces you

may reckon a quarter for the waſte, and ſo four feet thereof to be worth as much as three, and ſo let it be meaſured to the full content thereof.

Therefore now I ſhall, as briefly as I can, ſhew you the readieſt ways to finde the true content of any round piece of timber.

And you may finde this out either by the Diameter, or by the circumference.

If you work by the Diameter, the rule is this;

*As 1 to 0, 7854;*
*So the Square of the Diameter.*
*To the content of the Circle.*

If you work by the compaſs of the circle, which I think will be beſt and moſt ready to be found, then take this rule:

*As 1 to 0, 0796.*
*So the ſquare of the circumference*
*To the content of the Circle.*

And thus having found the content or Area of the circle, you may by the Table (page 145) finde how many feet are in the foot length thereof.

Or you may work this ſomewhat ſhorter thus.

*As 1 to 0,0005526,*
*So the square of the circumference*
*To the proportion of one foot in length thereof, to the measure in feet.*

And according to this rule, I have framed this Table, to help those that are not so ready in these operations, and so might fall into some mistake. By which taking only the compass of the timber, they may know the quantity of the length of a foot thereof.

*A Table, which by the Compass of any piece of round timber shews the true measure of one foot length thereof.*

| Inches of the Compass. | | | | | | | |
|---|---|---|---|---|---|---|---|
| Co | f.pts. | Co | f pts. | Co | f pts | | |
| 10 | 0 035 | 40 | 0,537 | 70 | 2,707 | | |
| 11 | 0,066 | 41 | 0,929 | 71 | 2,760 | | |
| 12 | 0,079 | 42 | 0,974 | 72 | 2,864 | | |
| 13 | 0,093 | 43 | 1,021 | 73 | 2,941 | | |
| 14 | 0,108 | 44 | 1,070 | 74 | 3,022 | | |
| 15 | 0,124 | 45 | 1,119 | 75 | 3,108 | | |
| 16 | 0,141 | 46 | 1,169 | 76 | 3,196 | | |
| 17 | 0,159 | 47 | 1,220 | 77 | 3,287 | | |
| 18 | 0,179 | 48 | 1,273 | 78 | 3,380 | | |
| 19 | 0,200 | 49 | 1,327 | 79 | 3,475 | | |
| 20 | 0,221 | 50 | 1,381 | 80 | 3,573 | | |
| 21 | 0,243 | 51 | 1,437 | 82 | 3,674 | | |
| 22 | 0,267 | 52 | 1,496 | 83 | 3,778 | | |
| 23 | 0,292 | 53 | 1,552 | 84 | 3,885 | | |
| 24 | 0 318 | 54 | 1,612 | 85 | 3,994 | | |
| 25 | 0,343 | 55 | 1,671 | 86 | 4,106 | | |
| 26 | 0,374 | 56 | 1,732 | 87 | 4,220 | | |
| 27 | 0,403 | 57 | 1,795 | 88 | 4,337 | | |
| 28 | 0,433 | 58 | 1,860 | 89 | 4,457 | | |
| 29 | 0,465 | 59 | 1,923 | 90 | 4,577 | | |
| 30 | 0 497 | 60 | 1,988 | 91 | 4,703 | | |
| 31 | 0,531 | 61 | 2,056 | 92 | 4,830 | | |
| 32 | 0,566 | 62 | 2,134 | 93 | 4,960 | | |
| 33 | 0,602 | 63 | 2,193 | 94 | 5,092 | | |
| 34 | 0,639 | 94 | 2,264 | 95 | 5,226 | | |
| 35 | 0,677 | 65 | 2,335 | 96 | 5,363 | | |
| 36 | 0,716 | 66 | 2,407 | 97 | 5,503 | | |
| 37 | 7 756 | 67 | 2,480 | 98 | 5,645 | | |
| 38 | 0,798 | 8 | 2,555 | 99 | 5,790 | | |
| 39 | 0,840 | 69 | 2 631 | 100 | 5,938 | | |

## *The use of this Table.*

THE use of this Table is plain and ready; for having the compass of the timber in inches, finde it out in this Table, and so you shall there finde the true quantity of one foot length thereof, which if you multiply by the number of feet, which the timber hath in length, it shews the true content thereof.

Thus a piece of timber 48 inches in compass, and 20 foot long is 25 feet,460 parts.

| | |
|---|---|
| *For* 48 *Inches in compass gives* | 1,273 |
| *which multiplied by* 20 | 20 |
| *Yields* | 25,460 |

Which is 25 foot, and almost an half; whereas reckoning 12 Inches, which is the quarter of the compass, to be the square, it would yield but 20 feet, and so there would be 5 feet and almost an half lost in this piece of timber.

This Table may be also drawn into a line or two upon a Ruler, but I want time to shew how, therefore I shall leave it to the Artist himself, who shall have most occasion for it.

A Table shewing how many Inches in length makes one foot of Timber, according to the compass of any round piece of Timber.

*The Compass of the Tree in Inches.*

| Co | In pts. | Co | In pts. | Co. | In pts. |
|---|---|---|---|---|---|
| 10 | 217.15 | 40 | 13.572 | 70 | 4.432 |
| 11 | 179.46 | 41 | 12.916 | 71 | 4.308 |
| 12 | 150.80 | 42 | 12.310 | 72 | 4.198 |
| 13 | 128.49 | 43 | 11.744 | 73 | 4.075 |
| 14 | 110.79 | 44 | 11.211 | 74 | 3.960 |
| 15 | 94.312 | 45 | 10.723 | 75 | 3.861 |
| 16 | 84.822 | 46 | 10.262 | 76 | 3.760 |
| 17 | 75.137 | 47 | 9.830 | 77 | 3.663 |
| 18 | 67.020 | 48 | 9.425 | 78 | 3.569 |
| 19 | 60.151 | 49 | 9.044 | 79 | 3.479 |
| 20 | 54.286 | 50 | 8.686 | 80 | 3.393 |
| 21 | 49.228 | 51 | 8.349 | 81 | 3.310 |
| 22 | 44.865 | 52 | 8.030 | 82 | 3.230 |
| 23 | 40.904 | 53 | 7.730 | 83 | 3.152 |
| 24 | 37.690 | 54 | 7.417 | 84 | 3.078 |
| 25 | 34.743 | 55 | 7.178 | 85 | 3.006 |
| 26 | 32.122 | 56 | 6.924 | 86 | 2.936 |
| 27 | 29.787 | 57 | 6.684 | 87 | 2.869 |
| 28 | 27.697 | 58 | 6.455 | 88 | 2.804 |
| 29 | 25.820 | 59 | 6.238 | 89 | 2.742 |
| 30 | 24.127 | 60 | 6.030 | 90 | 2.681 |
| 31 | 22.596 | 61 | 5.536 | 91 | 2.622 |
| 32 | 21.206 | 62 | 5.649 | 92 | 2.566 |
| 33 | 19.936 | 63 | 5.471 | 93 | 2.511 |
| 34 | 18.784 | 64 | 5.301 | 94 | 2.458 |
| 35 | 17.736 | 65 | 5.140 | 95 | 2.406 |
| 36 | 16.755 | 66 | 4.985 | 96 | 2.356 |
| 37 | 15.862 | 67 | 4.837 | 97 | 2.307 |
| 38 | 15.038 | 68 | 4.696 | 98 | 2.261 |
| 39 | 14.276 | 69 | 4.561 | 99 | 2.216 |
| | | | | 100 | 2.171 |

Having received information, that the measuring of round Timber is of much concernment; to make the former Rules more plain, I have added this Table, agreeable to the ordinary wayes and rules of measuring Timber, which shews by the compass of any tree or round timber-log; how many Inches and parts thereof make one foot of Timber, the use whereof is thus.

Take the compass of the tree, and so finde how many inches it is about; look this compass in the Table, and by it you shall see how many inches make a foot of Timber; then with a Ruler, or a pair of Compasses, measure how many times you finde that length in the piece of Timber, and so many feet there is of it. Thus the compass of a tree being 60 Inches, you shall finde in the Table 6 inches, and 030 parts, that is a very little more than 6 Inches in length, make a foot of timber: so that if the tree be 12 foot long, there is very near 24 foot of timber in it: for 12 foot and one inch is somewhat above 24 feet. This being the common way of measuring, I hope needs the less explaining; only because most trees are tapering, you must allow for that as in the next Chapter.

If any tree exceed the compass of 100 inches,

inches, take half the compass, and find the number in the Table belonging thereto, and divide it by 4, or take a fourth part of it, and that makes a foot of Timber. Thus, suppose a tree be 146 inches about, the half of this is 73, and against this in the Table, I finde 4 inches, 075 parts, one quarter whereof, viz. 1 inch, 019 parts makes one foot of timber.

---

## *To measure Tapering Timber.*

TApering Timber (according as the base thereof is either round, or right lined) is either a Cone or a Pyramide, or a segment of one of these.

If it be a compleat Cone or Pyramide having but one base, and ending in a sharp point, then you must, multiply the Area of the base by a third part of the height.

Thus, suppose the four-square Pyramide ABC to be 45 foot long, and 18 inches square at the base. You shall finde by the Table of Timber measure (page 136) that 18 inches square yield for the content of one foot length 2 feet, 250 parts: this multiplied by 15 feet, which is one third of the length thereof, makes 33 feet, 750 parts.

Thus the whole Pyramide is easily measured.

But now suppose there were onely a part thereof to be measured, *viz.* D K B C; being 30 foot long from D to B, being six inches square at D, and 18 inches square at B, as before.

The common way used herein, is to finde out the square in the very midst thereof, and to work by that as if it were the true square, but this way, though it be true in Flats, as Boards, or Land, yet here it yields alwayes somewhat less.

For according to this rule, the square in the midst at F is 12 inches, and so the piece of timber should be 30 foot in quantity. But this is not the exact truth.

For

For proof hereof, these two parts of the Pyramide AD and DB must, as you saw before, make up 33 feet, 750 parts.

But the top of the Pyramide AD, measured by the true rule, makes but 1 foot, 250 parts. For the base thereof D K being six Inches square.

| | |
|---|---|
| *The solid content of one foot is* | 0.250 |
| *Which multiplied by a third of the length 5 feet* | 5.000 |
| *Yields* | 1.250 |

Now this 1 foot, 250 parts added to the 30 feet, which was thought to be the measure of the lower part D B, makes but 31 feet, 250 parts, whereas you see it should be 33 feet 250 parts So that here is lost 2 feet, and an half of Timber by this way of measuring.

And this way of *Ramus*, to measure both the parts of the Pyramis, and then to substract one from the other, seems to me more plain and easie than that prescribed by Mr. *Oughtred*, and Mr. *Wingate*, for the measuring of such tapering-timber. But you may say, How shall we finde the length of the part of the Pyramis which is wanting.

I answer, Observe the difference between the two ends, which in this example is 12 inches, and this proportion will hold well enough in such kinde of Pyramids.

| | |
|---|---|
| As the difference of the two ends | 12 inches. |
| To the length between them | 30 feet. |
| So the greater base | 18 inches. |
| To the whole length | 45 feet |

And thus the whole Piramis being found, as before to be 33 feet, 750 parts.

| | |
|---|---|
| And the top thereof to be substracted | 1 foot, 250 parts. |
| There remains for the other part | 32 feet, 500 parts |

And this is the true quantity of the said tapering piece of Timber.

If this way seem too troublesome to the common sort of measurers, they may then measure such pieces of Timber, as if they were two or three several pieces; and thus measuring in the midst of every ten feet length; they will finde the work very easie by these Tables, and much more exact than their common way at once measuring.

Thus, this piece of Timber being 30 foot long,

The square thereof at G, which is in the midst of the first 10 feet is 16 inches, to which

which there answers in the Table of Timber-measure 1778; which multiplied by 10 by adding a cipher, and setting the (.) a figure forwarder, makes F. pa 17 7

*The like at* F, *for the next* 10 *feet, being* 12 *inch* s *square* } ii 10.0

*The like at* E, *for the last* 10 *feet, being* 8 *inches square* } 4.44

*The sum of all three is* 32.22
*Which lacks only* 00,18
*Of the true content* 32.00

As I have shewed you how to do with this square tapering-timber, so you may by the round tapering-timber, working in the table of round timber (p. 129) Also you may see how to measure any other many sided Pyramis. But I have been already too long in these things: only the usefulness hereof (all timber being almost of this fashion) and the errors of many herein, and the little which hath been written hereof by others hath made me the more large.

Note, if any of the numbers of these tables be too little for your occasion, you may work by the half thereof.

The

Thus, suppose a piece of Timber or Stone to be 48 inches square. This Table, *p.*134, reacheth but to 36 inches square; therefore take the half of your number, which will be 24; and this in the Table gives you 2 feet 000 parts; and this is the quantity of one quarter of a foot length thereof, so that if you multiply it by 4, it makes 16 feet which is the content of one foot length of the piece of timber: and so work, as before.

---

## *Of Ganging.*

THere is not much difference (in the thing it self) from measuring of other solids; only they are measured by feet and inches; these by gallons, quarts, and pints, or the parts thereof.

There are two things herein chiefly necessary, yet both much controverted.

First, these Vessels being all of irregular forms, how to reduce them to a regular proportion.

Secondly, to finde the true quantity of the Gallon in cubick inches or parts of a foot.

For

For the first of these, the best way is this, according to Mr. *Oughtred*.

Measure the Diameter of the vessel both at the bung, and at the head thereof; and by the Diameters finde out the Area of the circles. Then take two thirds of the Area of the Circle at the bung, and one third of the Area of the Circle of the head, and adde them together: and lastly, multiply the sum thereof by the length of the vessel.

For the second thing, the content of each English Gallon, which is the measure of all these Vessels. This is most commonly received, that a Wine Gallon contains 231 cubick inches: yet Dr *Wybard* pleads very strongly, that it is somewhat less, making the Wine-Gallon to be 224 inches, or 225 at most. But the difference being so small, the error will not be much; and therefore till the exact truth be more certainly known, I shall, with the most, follow the first, counting it better to allow rather a little over-measure, than any thing under.

Thus for example, suppose a vessel, whose Diameter at the Bung is 32 inches, and at the head 18 Inches, and the length 40 Inches.

| | |
|---|---|
| *Two thirds of the Circle at the bung are* | 536,166 |
| *Out third of the circle at the head is* | 84,823 |
| *The summe of these 2* | 620,789 |
| *which multiplied by the length 40 Inches* | 40 |
| *The summe is* | 24839,560 |

*This is the solid content of the vessel.*

Now there being 231 cubick Inches in a wine Gallon, if you divide this 24839,560 by 231, you shall finde 107. 530.

So that there are 107 Gallons, and 530 parts, which is a little above half a Gallon in the said vessel.

According to these rules and observations I have calculated this Table, without which it would be very troublesome to finde this out at length, *viz.* first the Area of the Circles, and then the content of the Vessel in cubick inches; and lastly, to reduce this into Gallons; therefore this Table shews you one third, and two thirds of the Area of any Circle, readie cast up in the parts of a Gallon, for any Diameter to 60 inches, whereby so much of the labour will be saved.

If you desire a more particular account of the manner of calculating this Table; it is grounded upon these Theorems.

First,

First, as 1 to 0, 7854
So the square of the Diameter; 1 inch
To the content of the Circle. 07854
Secondly, As 231, the square inches in a Wine Gallon,
To 1 gallon or parts 1,0000
So the content of the Circle, 0,7854
To the parts of a gallon, 0,0034

So that the Area of a Circle having one inch for its Diameter, is the 0, 0034 part of a gallon.

Now a third part of this number is 0,001133. This number therefore 1133 being multiplied by the square of any Circles Diameter taken by inch measure, gives the third part of the content thereof in Wine measure, which are the parts to be taken of the Circle at the head of the Cask. And this same number doubled is two thirds of the like circle, being the parts to be taken at the bung of the Cask. Thus much for the making of the Table; which you may increase as you please to any parts of an inch.

A Table for the Gauging of Wine-Vessels.

| D. | Head G.pts | Bung G.pts | D. | Head G.pts | Bung G.pts |
|---|---|---|---|---|---|
| 01 | 0,001 | 0,002 | 31 | 1,089 | 2,178 |
| 02 | 0,004 | 0,009 | 32 | 1,160 | 2,321 |
| 03 | 0,010 | 0,020 | 33 | 1,234 | 2,468 |
| 04 | 0,018 | 0,036 | 34 | 1,310 | 2,620 |
| 05 | 0,028 | 0,056 | 35 | 1,388 | 2,776 |
| 06 | 0,041 | 0,081 | 36 | 1,469 | 2,938 |
| 07 | 0,056 | 0,111 | 37 | 1,551 | 3,102 |
| 08 | 0,072 | 0,145 | 38 | 1,636 | 3,272 |
| 09 | 0,092 | 0,183 | 39 | 1,724 | 3,448 |
| 10 | 0,113 | 0,226 | 40 | 1,813 | 3,625 |
| 11 | 0,137 | 0,274 | 41 | 1,904 | 3,809 |
| 12 | 0,163 | 0,326 | 42 | 2,000 | 4,000 |
| 13 | 0,192 | 0,383 | 43 | 2,096 | 4,191 |
| 14 | 0,222 | 0,444 | 44 | 2,194 | 4,388 |
| 15 | 0,255 | 0,510 | 45 | 2,295 | 4,588 |
| 16 | 0,290 | 0,580 | 46 | 2,398 | 4,796 |
| 17 | 0,328 | 0,657 | 47 | 2,504 | 5,007 |
| 18 | 0,367 | 0,734 | 48 | 2,611 | 5,222 |
| 19 | 0,409 | 0,818 | 49 | 2,721 | 5,442 |
| 20 | 0,453 | 0,906 | 50 | 2,833 | 5,665 |
| 21 | 0,500 | 1,000 | 51 | 2,948 | 5,895 |
| 22 | 0,548 | 1,097 | 52 | 3,065 | 6,129 |
| 23 | 0,600 | 1,199 | 53 | 3,184 | 6,367 |
| 24 | 0,653 | 1,305 | 54 | 3,305 | 6,609 |
| 25 | 0,708 | 1,416 | 55 | 3,428 | 6,856 |
| 26 | 0,766 | 1,532 | 56 | 3,554 | 7,108 |
| 27 | 0,826 | 1,692 | 57 | 3,682 | 7,364 |
| 28 | 0,888 | 1,777 | 58 | 3,813 | 7,625 |
| 29 | 0,953 | 1,906 | 59 | 3,945 | 7,890 |
| 30 | 1,020 | 2,040 | 60 | 4,080 | 8,160 |

The

*The use of this Table is this.*

First, measure the Diameter at the He and finde the number in the Table belon ing to it. Then measure the Diameter a the bung, and finde the number belong to that. Then adde these two together, an multiply the sum thereof by the Inches the vessels length, measured in the insi of the Vessel from head to head.

Thus, according to Mr. *Oughtreds* ex ample, in the Circles of proportion: Sup pose a Vessel having the Diameter at t Head 18 Inches, the Diameter at the Bu 32 Inches, and the length thereof 40 In ches; the content thereof is thus found.

| | |
|---|---|
| *The Table shews* | G, pa |
| *For 18 inches at the Head* | 0,3 |
| *For 32 Inches at the Bung,* | 2,3 |
| *These two added together, make* | 2,6 |
| *Which multiplied by the length, being 40 inches* | |
| *Makes* | 107, |

According to his operation it should 107 gallons, 530 parts, which differenc of no moment in these conclusions.

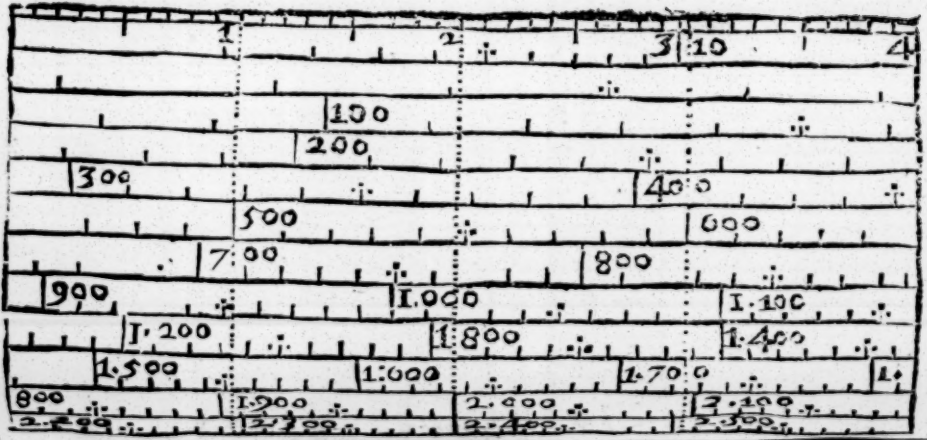
## *Of the Gauging Line.*

NOw because this Table is cast up only to whole Inches, though the proportional difference for any part of an Inch may be found easily thereby: yet since the number of these Inches must first be measured by some Rod or other in the Vessel itself; you may set this line so upon your rod, that without having respect to the Inch-measure, it will shew you the true Area of the Circle in Gallon measure, by the depth of the Diameter.

This line therefore, though the figure is but four inches long, yet the twelve lines therein are supposed to be one continued line, being in all four feet, or 48 Inches long; which is as long as most vessels require; but you may enlarge it as you please.

Note this line shews only a third part of the Area of any Circle, whose Diameter is measured thereby; so it is properly to be used only in measuring the Diameters at the ends. But if you double the numbers hereof; so you shall have two thirds of the Diameter, and so you may use it for the Diameter at the bung, or else make another line on purpose for them.

*These Gauging Rulers are made by Mr.* Hayes *in* Moor-fields *by the Popes Head Tavern, and by Mr.* John Nash, *at the Globe within* Aldgate.


1
2
3
10
4
100
200
300
400
500
600
700
800
900
1.000
1.100
1.200
1.800
1.400
1.500
1.000
1.700
800
1.900
2.000
2.100
2.200
2.300
2.400
2.500

Now the use of this line is the same with the Table, and is to be only instead of a larger Table, shewing the parts of a Gallon belonging to each inch. As you may see by the former example.

| | |
|---|---|
| *The Gauging line shews* | *Gal. parts* |
| *For 18 inches at the head* | 0,367 |
| *For 32 inches, which must be doubled, because at the bung.* | 1,160 5 |
| | 1,160 5 |
| *Yields as before,* | 2,638,0 |
| *And multiplied by the length* | 40 |
| *Yields, as before,* | 107,520 |

And thus working by this line, you may readily finde these numbers to the 1000 part of a Gallon, for each 1000 part of an inch, which is as exact I think as need be

And thus this troublesome business is very easily performed, without any Equation of Diameters, or Reduction of Measures; which with some confidence I dare present to the candid censure of the better learned, and to the practice of such as have use thereof,

*How to make this Gauging-line, and to set it upon a Gauging Rod.*

But though this operation by this line is performed easily, yet the making

of this line, will at the first be some trouble, unless you know how to finde out some certain equal numbers thereof, viz. every 5 or 10 parts; otherwise, you will never divide the line either readily or handsomely by the former Table.

Now to finde out these parts, you may remember that 11333, or more exactly, the third part of 34 was the number by which the Table was framed, So that

*As* 34 *to* 3, *so* 1 *to* 882352941.

This number, or six of the first figures thereof, you must multiply by the parts you desire, and then extract the square-root (as before in the line of Timber-measure) so you may finde any part of this line as in this Table, and draw this Gauging-line very exactly thereby, having an inch-line upon your Rule, divided into decimal parts.

| *Parts.* | *Squares.* | *Roots,* | *Inch parts.* |
|---|---|---|---|
| 1 | 882352 | 939 | 0,939 |
| 10 | 8823529 | 2975 | 2,975 |
| 100 | 88235294 | 9393 | 9,393 |
| 1000 | 882352941 | 29704 | 29,704 |

## A Table to divide the Ganging-line for Wine measure

| line | In parts | line | in parts | line | in part |
|---|---|---|---|---|---|
| 1 | 0,910 | 160 | 11,882 | 400 | 18,787 |
| 2 | 1,328 | 170 | 12,247 | 410 | 19 020 |
| 3 | 1,627 | 180 | 12,602 | 420 | 19,25[illegible] |
| 4 | 1,879 | 190 | 12 948 | 430 | 19 478 |
| 5 | 2,100 | 200 | 13,284 | 440 | 19,703 |
| 6 | 2,301 | 210 | 13,612 | 450 | 19,920 |
| 7 | 2,485 | 220 | 13,933 | 460 | 20,146 |
| 8 | 2,657 | 230 | 14,246 | 470 | 20,365 |
| 9 | 2,818 | 240 | 14,552 | 480 | 20,580 |
| 10 | 2,970 | 250 | 14,852 | 490 | 20,793 |
| 20 | 4,201 | 260 | 15,146 | 500 | 21,004 |
| 30 | 5,145 | 270 | 15,435 | 510 | 21,214 |
| 40 | 5,941 | 280 | 15,718 | 220 | 21,420 |
| 50 | 6,642 | 290 | 15,997 | 530 | 21,625 |
| 60 | 7,276 | 300 | 16,270 | 540 | 21,826 |
| 70 | 7,859 | 310 | 16,539 | 550 | 22,028 |
| 80 | 8,401 | 320 | 16,803 | 560 | 22,228 |
| 90 | 8,911 | 330 | 17,064 | 570 | 22,427 |
| 100 | 9,393 | 340 | 17,320 | 580 | 22,621 |
| 110 | 9,852 | 350 | 17,573 | 590 | 22,815 |
| 120 | 10,287 | 360 | 17,823 | 600 | 23,008 |
| 130 | 10,710 | 370 | 18,069 | 610 | 23,200 |
| 140 | 11,114 | 380 | 18,311 | 620 | 23,390 |
| 150 | 11,504 | 390 | 18,550 | 630 | 23,575 |

Parts of the Ganging-line 1000 parts in one Gallon.

*A Table to divide the Gauging line for Wine-measure.*

| line | In parts | line | In parts | line | In parts |
|---|---|---|---|---|---|
| 640 | 22,763 | 880 | 27,865 | 2200 | 44,058 |
| 650 | 23,948 | 890 | 28,022 | 2300 | 45,049 |
| 660 | 24,132 | 900 | 28,180 | 2400 | 46,019 |
| 670 | 24,325 | 910 | 28,336 | 2500 | 46,966 |
| 680 | 24,495 | 920 | 28,491 | 2600 | 47,898 |
| 690 | 24,674 | 930 | 28,646 | 2700 | 48,809 |
| 700 | 24,852 | 940 | 28,800 | 2800 | 49,705 |
| 710 | 25,029 | 950 | 28,954 | 2900 | 50,585 |
| 720 | 25,205 | 960 | 29,105 | 3000 | 51,449 |
| 730 | 25,382 | 970 | 29,254 | 3100 | 52,300 |
| 740 | 25,553 | 980 | 29,407 | 3200 | 53,137 |
| 750 | 25,725 | 990 | 29,555 | 3300 | 53,961 |
| 760 | 25,895 | 1000 | 29,704 | 3400 | 54,777 |
| 770 | 26,066 | 1100 | 31,153 | 3500 | 55,572 |
| 780 | 26,234 | 1200 | 32,530 | 3600 | 56,360 |
| 790 | 26,401 | 1300 | 33,867 | 3700 | 57,137 |
| 800 | 26,569 | 1400 | 35,148 | 3800 | 57,905 |
| 810 | 26,734 | 1500 | 36,380 | 3900 | 58,661 |
| 820 | 26,898 | 1600 | 37,575 | 40 0 | 59,409 |
| 830 | 27,062 | 1700 | 38,730 | | |
| 840 | 27,225 | 1800 | 39,853 | | |
| 850 | 27,383 | 1900 | 40,945 | | |
| 860 | 27,548 | 2000 | 42,008 | | |
| 870 | 27,704 | 2100 | 43,045 | | |

Yet becauſe theſe Gauging lines are not ſo ready to be had, and many have Gauging lines already which are divided into inches. by which you may exactly meaſure the Diameters at the head and bung of the veſſel; I have encreaſed the former Table, to ſhew the third part of the Area of any Circle in Gallon meaſure, to every tenth part of an inch, which will ſerve for the Diameters at the head; and then for the Diameters at the bung, you muſt double the numbers in this Table, and ſo work as before.

The Table is ſo plain it needs no explaining, only take notice that you muſt finde the whole Inches in the ſides of the Table, and the parts of inches at the head of the Table, and in the ſquare meeting of theſe two, you ſhall finde the gallons and parts which you muſt uſe before as in the other Table.

## A Table of Gauging for Wine Vessels.

### Parts of an Inch.

| Inches | | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| | G pts | G pts | G.pts | G pts | G pts |
| 1 | 0,001 | 0,001 | 0,002 | 0,002 | 0,00 |
| 2 | 0,004 | 0,005 | 0,006 | 0,006 | 0,00 |
| 3 | 0,010 | 0,011 | 0,012 | 0,012 | 0,01 |
| 4 | 0,018 | 0,019 | 0,020 | 0,021 | 0,02 |
| 5 | 0,028 | 0,029 | 0,030 | 0,032 | 0,03 |
| 6 | 0,041 | 0,042 | 0,044 | 0,045 | 0,04 |
| 7 | 0,056 | 0,057 | 0,059 | 0,060 | 0,06 |
| 8 | 0,072 | 0,074 | 0,076 | 0,078 | 0,08 |
| 9 | 0,092 | 0,094 | 0,096 | 0,098 | 0,10 |
| 10 | 0,113 | 0,116 | 0,118 | 0,120 | 0,12 |
| 11 | 0,137 | 0,140 | 0,141 | 0,145 | 0,147 |
| 12 | 0,163 | 0,166 | 0,169 | 0,171 | 0,174 |
| 13 | 0,192 | 0,195 | 0,197 | 0,200 | 0,203 |
| 14 | 0,222 | 0,225 | 0,229 | 0,232 | 0,235 |
| 15 | 0,255 | 0,258 | 0,262 | 0,265 | 0,269 |
| 16 | 0,290 | 0,294 | 0,297 | 0,301 | 0,305 |
| 17 | 0,328 | 0,331 | 0,335 | 0,339 | 0,343 |
| 18 | 0,367 | 0,371 | 0,375 | 0,379 | 0,384 |
| 19 | 0,409 | 0,413 | 0,418 | 0,422 | 0,426 |
| 20 | 0,453 | 0,458 | 0,462 | 0,467 | 0,472 |
| 21 | 0,500 | 0,505 | 0,509 | 0,514 | 0,519 |
| 22 | 0,549 | 0,554 | 0,559 | 0,564 | 0,569 |
| 23 | 0,600 | 0,605 | 0,610 | 0,615 | 0,620 |
| 24 | 6,653 | 0,658 | 0,664 | 0,669 | 0,675 |
| 25 | 0,708 | 0,714 | 0,720 | 0,725 | 0,731 |
| 26 | 0,766 | 0,772 | 0,778 | 0,784 | 0,790 |
| 27 | 0,826 | 0,832 | 0,838 | 0,845 | 0,851 |
| 28 | 0,888 | 0,895 | 0,901 | 0,908 | 0,914 |
| 29 | 0,953 | 0,960 | 0,966 | 0,973 | 0,980 |
| 30 | 1,020 | 1,027 | 1,034 | 1,041 | 1,048 |

## A Table for Guaging of Wine Vessels.

### Parts of an Inch.

| Inches | 5 G.pts | 6 G.pts | 7 G.pts | 8 G.pts | 9 G.pts |
|---|---|---|---|---|---|
| 1 | 0,003 | 0,003 | 0.003 | 0.004 | 0.004 |
| 2 | 0,007 | 0,008 | 0.008 | 0.009 | 0.009 |
| 3 | 0,014 | 0,015 | 0.016 | 0.016 | 0.017 |
| 4 | 0,023 | 0,024 | 0.025 | 0.026 | 0.027 |
| 5 | 0,034 | 0,036 | 0.037 | 0.038 | 0.039 |
| 6 | 0,048 | 0,049 | 0.051 | 0.052 | 0.054 |
| 7 | 0,064 | 0,065 | 0.067 | 0.069 | 0.071 |
| 8 | 0,082 | 0,084 | 0.086 | 0.088 | 0.090 |
| 9 | 0,102 | 0,104 | 0.107 | 0 109 | 0.111 |
| 10 | 0,125 | 0,127 | 0.130 | 0.132 | 0.135 |
| 11 | 0,150 | 0,152 | 0.155 | 0.158 | 0.160 |
| 12 | 0,177 | 0,180 | 0.183 | 0.186 | 0.189 |
| 13 | 0,207 | 0,210 | 0.213 | 0.216 | 0.219 |
| 14 | 0,238 | 0,242 | 0.245 | 0.248 | 0.252 |
| 15 | 0,272 | 0,276 | 0.279 | 0.283 | 0.287 |
| 16 | 0,308 | 0,312 | 0.316 | 0.320 | 0.324 |
| 17 | 0,347 | 0,351 | 0.355 | 0.359 | 0.363 |
| 18 | 0,388 | 0,392 | 0.396 | 0.400 | 0.405 |
| 19 | 0.431 | 0,435 | 0.440 | 0.444 | 0.449 |
| 20 | 0,476 | 0,481 | 0.486 | 0.490 | 0.495 |
| 21 | 0,524 | 0,529 | 0.534 | 0.539 | 0.544 |
| 22 | 0,574 | 0,579 | 0.584 | 0.589 | 0.594 |
| 23 | 0,626 | 0,631 | 0.636 | 0.642 | 0.647 |
| 24 | 0,680 | 0,686 | 0.691 | 0.697 | 0.703 |
| 25 | 0,737 | 0,743 | 0.749 | 0.754 | 0.760 |
| 26 | 0,796 | 0,802 | 0.808 | 0.814 | 0.820 |
| 27 | 0,857 | 0,863 | 0.870 | 0.876 | 0.882 |
| 28 | 0,920 | 0,927 | 0.934 | 0.940 | 0.947 |
| 29 | 0,986 | 0,993 | 1.000 | 1.006 | 1.013 |
| 30 | 1.054 | 1.061 | 1.068 | 1.075 | 1.082 |

## A Table of Gauging for Wine Vessels.

### Parts of Inches.

| Inches | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| | G.pts | G pts | G.pts | G.pts | G pts |
| 31 | 1,089 | 1,096 | 1,103 | 1,110 | 1,117 |
| 32 | 1,160 | 1,168 | 1,175 | 1,182 | 1,190 |
| 33 | 1,234 | 1,242 | 1,249 | 1,257 | 1,264 |
| 34 | 1,310 | 1,318 | 1,325 | 1,333 | 1,341 |
| 35 | 1 388 | 1,396 | 1,404 | 1,412 | 1,420 |
| 36 | 1,469 | 1,477 | 1,485 | 1,493 | 1,501 |
| 37 | 1,551 | 1,560 | 1,568 | 1,577 | 1,585 |
| 38 | 1,636 | 1,645 | 1,654 | 1,662 | 1,671 |
| 39 | 1,724 | 1 733 | 1,741 | 1,750 | 1,758 |
| 40 | 1,813 | 1,822 | 1,831 | 1,841 | 1,850 |
| 41 | 1,905 | 1,914 | 1,924 | 1,933 | 1,943 |
| 42 | 2,000 | 2,009 | 2,018 | 2,028 | 2,037 |
| 43 | 2.096 | 2,105 | 2,115 | 2,125 | 2,135 |
| 44 | 2,194 | 2,204 | 2,214 | 2,224 | 2,234 |
| 45 | 2,295 | 2,305 | 2,316 | 2,326 | 2,336 |
| 46 | 2,398 | 2,408 | 2,419 | 2,429 | 2,440 |
| 47 | 2,504 | 2,514 | 2,525 | 2,536 | 2,547 |
| 48 | 2,611 | 2,622 | 2,633 | 2,644 | 2,655 |
| 49 | 2,721 | 2,732 | 2,744 | 2,755 | 2,766 |
| 50 | 2,833 | 2,845 | 2,856 | 2,868 | 2,879 |
| 51 | 2,948 | 2,959 | 2,971 | 2 983 | 2,994 |
| 52 | 3,065 | 3,076 | 3,088 | 3,100 | 3,112 |
| 53 | 3,284 | 3,296 | 3,208 | 3,220 | 3,232 |
| 54 | 3,305 | 3,317 | 3,330 | 3,342 | 3,354 |
| 55 | 3,428 | 3,441 | 3,453 | 3,466 | 3,478 |
| 56 | 3,554 | 3,567 | 3,580 | 3,593 | 3,605 |
| 57 | 3,682 | 3,695 | 3,708 | 3,721 | 3,734 |
| 58 | 3,813 | 3,626 | 3,839 | 3,852 | 3,866 |
| 59 | 3,945 | 3,959 | 3,972 | 3,986 | 3,999 |
| 60 | 4,080 | 4,094 | 4,107 | 4,121 | 4,135 |

## A Table for Gauging of Wine Vessels.

### Parts of Inches.

| Inches | 5 G.pts | 6 G.pts | 7 G.pts | 8 G pts | 9 G.pts |
|---|---|---|---|---|---|
| 31 | 1.125 | 1.132 | 1.139 | 1.146 | 1.152 |
| 32 | 1.197 | 1.204 | 1.212 | 1.219 | 1.227 |
| 33 | 1.272 | 1.279 | 1.287 | 1.295 | 1.302 |
| 34 | 1.349 | 1.357 | 1.365 | 1.373 | 1.380 |
| 35 | 1.428 | 1.436 | 1.444 | 1.452 | 1.461 |
| 36 | 1.510 | 1.518 | 1.526 | 1.535 | 1.543 |
| 37 | 1.594 | 1.602 | 1 619 | 1.619 | 1.628 |
| 38 | 1.680 | 1.689 | 1 697 | 1.706 | 1.715 |
| 39 | 1.768 | 1.777 | 1.786 | 1.795 | 1.804 |
| 40 | 1.859 | 1.868 | 1.877 | 1.886 | 1.896 |
| 41 | 1.952 | 1.961 | 1 971 | 1 980 | 1.990 |
| 42 | 2.047 | 2.057 | 2.066 | 2.076 | 2.086 |
| 43 | 2.145 | 2.154 | 2.164 | 2.174 | 2.184 |
| 44 | 2.244 | 2.254 | 2.264 | 2.275 | 2.285 |
| 45 | 2.346 | 2.356 | 2.367 | 2.377 | 2.388 |
| 46 | 2.450 | 2.461 | 2.472 | 2.482 | 2.493 |
| 47 | 2.557 | 2.568 | 2.579 | 2.589 | 2.600 |
| 48 | 2.666 | 2.677 | 2.688 | 2.699 | 2.710 |
| 49 | 2.777 | 2.788 | 2.800 | 2.811 | 2.822 |
| 50 | 2.890 | 2.902 | 2.913 | 2.925 | 2.936 |
| 51 | 3.006 | 3.018 | 3.030 | 3.041 | 3.053 |
| 52 | 3.124 | 3.136 | 3 148 | 3.160 | 3 172 |
| 53 | 3 244 | 3 256 | 3.268 | 3.281 | 3.293 |
| 54 | 3.367 | 3.379 | 3.391 | 3.404 | 3.416 |
| 55 | 3.491 | 3.504 | 3.516 | 3.529 | 3.433 |
| 56 | 3.618 | 3.631 | 3,644 | 3.657 | 3.669 |
| 57 | 3.747 | 3.760 | 3.773 | 3.786 | 3.800 |
| 58 | 3.879 | 3.892 | 3.905 | 3.919 | 3.932 |
| 59 | 4.013 | 4.026 | 4.000 | 4-153 | 4.067 |
| 60 | 4.149 | 4.162 | 4.176 | 4.190 | 4.203 |

Of

## *Of the measuring of Ale or Beer Vessels.*

TO measure Ale or Beer-Vessels, your best way will be to make the like Tables and line as for Wine measure; and so the practice will be all one.

But first you must know the true content of the Ale Gallon, concerning which there are divers reports and accounts. Some ancient Artists, *viz.* Mr. *Goodwin*, and Mr. *Reynolds* affirm, that the proportion between the Ale Gallon and Wine-Gallon is as 4 to 5; the Wine-Gallon being 231 inches, and the Ale-Gallon 286$\frac{3}{4}$. This, by Mr. *Oughtred* is much lessened, being supposed by him to be but 272 inches, and $\frac{1}{4}$ and Dr. *Wybard* lessens it somewhat more, making it at the most but 270 inches. But so far as I can learn; there are three sorts of measures in use. The measure for Wine being 231 inches; the measure for dry things, as Corn, *&c.* being about 272; and the measure for Beer and Ale being 288 inches and $\frac{3}{4}$.

The

The proportion between these three gallons is 28, 33, 35; but having little to do with the middle Gallon, I shall take the Ale Gallon to be 288 inches and three quarters, and conclude the proportion between the Wine and Ale Gallon to be exactly as 4 to 5.

Now therefore if you have much occasion to gauge Beer-Vessels for your ready use, you may thus make the like Tables and Line as you did for the Wine measure.

*At 288 inches three quarters, the inches in one Ale-Gallon,*

| | |
|---|---|
| *To the part of a Gallon* | 1,00000 |
| *So the Content of the Circle, having one inch Diameter* | 0,7854 |
| *To the like parts of a Gallon* | 0,00272 |

Now a 3d part of this being 90 & 2 thirds, or 90,666 multiplied by the square of the Diameter of any Circle taken in inch-measure, gives a third part of the content thereof, which is the measure to be used for the head of the Vessel; and this doubled, shews the number to be used for two thirds of the Diameter at the Bung; and thus you may make a Table for Beer measure to as many inches and parts of inches as you please.

As

As you may see in this following Table of Beer-measure; which you must use as before for Wine-measure.

For Example, the *London* Coopers scantlings for a Beer Barrel is thus.

| | |
|---|---|
| *The Diameter at the head* | 19 *inches*, 9 *parts* |
| *The Diameter at the Bung*, | 23 *Inches*, 0 *parts* |
| *The length is* | 27 *inches*, 4 *parts* |

Now to finde out the content of this vessel by this Table.

| | G. parts |
|---|---|
| *The Table will shew* | |
| *For the* 19 *Inches* 9 *parts at the head* | 00,358 |
| *For the* 23 *Inches at the bung* | 00,480 |
| *Which must be doubled or repeated* | 00, 480 |
| *The Sum* | 01,319 |
| *This multiplied by the length* | 27,4 |
| | 36,140 |

Yields 36 Gallons, and 140 parts over, which is a little above a pint. By which it appears that the Beer Barrel agrees well enough with this rule, and may be a confirmation of the truth of the foresaid proportion between the Wine Gallon and the Beer Gallon, *viz.* as 4 to five.

The

The like you shall finde in the scantling for the Kilderkin.

| | | | G. parts. |
|---|---|---|---|
| Diam. at head | 16 Inches | 1 part, | 00, 235 |
| at Bung | 18 | 6 | 00,314 |
| The same again | | | 00.314 |
| *The Sum* | | | 00.863 |

*Multiplied by length* 21 *In.* 1 *pt.* 21.1

Yields 18 Gallons, and 209 parts over, being about a pint and an half too much.

Thus you see these Rules agree very well with the Coopers and Brewers, who are most concerned therein, and would not willingly allow so much over measure, as the other rules intimate, but would rather, if they had any truth, be ready to follow them for their own advantage.

## A Table for the Gauging

### Parts of an Inch.

| Inches | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| | G.pts | G.pts | G.pts | G.pts | G.pts |
| 1 | 0.001 | 0.001 | 0,002 | 0,002 | 0,002 |
| 2 | 0.004 | 0.004 | 0,004 | 0,005 | 0,00 |
| 3 | 0.008 | 0.009 | 0,009 | 0,010 | 0,01 |
| 4 | 0.014 | 0.015 | 0,016 | 0,017 | 0,017 |
| 5 | 0.023 | 0.024 | 0,024 | 0,025 | 0,026 |
| 6 | 0.033 | 0.034 | 0,035 | 0,036 | 0,037 |
| 7 | 0.044 | 0.046 | 0,047 | 0,048 | 0,550 |
| 8 | 0.058 | 0.059 | 0,064 | 0,062 | 0,064 |
| 9 | 0.073 | 0.075 | 0,077 | 0,078 | 0,080 |
| 10 | 0.091 | 0.092 | 0,094 | 0.096 | 0,098 |
| 11 | 0.110 | 0.112 | 0,114 | 0,116 | 0,118 |
| 12 | 0.130 | 0.133 | 0,135 | 0,137 | 0,139 |
| 13 | 0.153 | 0.156 | 0,158 | 0,160 | 0,163 |
| 14 | 0.178 | 0.180 | 0,183 | 0,185 | 0,188 |
| 15 | 0.204 | 0.207 | 2,209 | 0,212 | 0,215 |
| 16 | 0.232 | 0.235 | 0,238 | 0,241 | 0,244 |
| 17 | 0.262 | 0.265 | 0,269 | 0,271 | 0,274 |
| 18 | 0.294 | 0.297 | 0,300 | 0,304 | 0,307 |
| 19 | 0.327 | 0.330 | 0,334 | 0,338 | 0,341 |
| 20 | 0.363 | 0.366 | 0,370 | 0,374 | 0,377 |
| 21 | 0.400 | 0.404 | 0,407 | 0,411 | 0,415 |
| 22 | 0.439 | 0.443 | 0,447 | 0,451 | 0,455 |
| 23 | 0,480 | 0.484 | 0,488 | 0,492 | 0,496 |
| 24 | 0.522 | 0.527 | 0,531 | 0,535 | 0,540 |
| 25 | 0.567 | 0.571 | 0,576 | 0,580 | 0,585 |
| 26 | 0.613 | 0.618 | 0,622 | 0,627 | 0,632 |
| 27 | 0.661 | 0.666 | 0,671 | 0,677 | 0,682 |
| 28 | 0.711 | 0.716 | 0,721 | 0,726 | 0,732 |
| 29 | 0.762 | 0 768 | 0,773 | 0,778 | 0,784 |
| 30 | 0.816 | 0 821 | 0,827 | 0,822 | 0,838 |

*of Beer or Ale Vessels.*

*Parts of an Inch.*

| Inches | 5 G.pts | 6 G.pts | 7 G.pts | 8 G.pts | 9 G.pts |
|---|---|---|---|---|---|
| 1 | 0,003 | 0,003 | 0,003 | 0,003 | 0,004 |
| 2 | 0,006 | 0,006 | 0,007 | 0,007 | 0,008 |
| 3 | 0,011 | 0,012 | 0,012 | 0,013 | 0,014 |
| 4 | 0,018 | 0,019 | 0,020 | 0,021 | 0,022 |
| 5 | 0,027 | 0,028 | 0,029 | 0,030 | 0,032 |
| 6 | 0,038 | 0,039 | 0,041 | 0,042 | 0,043 |
| 7 | 0,051 | 0,052 | 0,054 | 0,055 | 0 057 |
| 8 | 0,065 | 0,067 | 0,069 | 0,070 | 0,072 |
| 9 | 0,082 | 0,084 | 0,085 | 0,087 | 0,089 |
| 10 | 0,100 | 0,102 | 0,104 | 0,106 | 0 108 |
| 11 | 0,120 | 0,122 | 0,124 | 0,126 | 0,128 |
| 12 | 0,142 | 0,144 | 0,146 | 0,148 | 0,151 |
| 13 | 0,165 | 0,168 | 0,170 | 0,173 | 0,175 |
| 14 | 0,191 | 0,193 | 0,196 | 0,199 | 0,201 |
| 15 | 0,218 | 0,221 | 0,223 | 0,226 | 0,229 |
| 16 | 0,247 | 0,250 | 0,253 | 0,256 | 0,259 |
| 17 | 0,278 | 0,281 | 0,284 | 0,287 | 0,290 |
| 18 | 0,310 | 0,314 | 0,317 | 0,320 | 0,324 |
| 19 | 0,345 | 0,348 | 0 352 | 0,355 | 0,359 |
| 20 | 0,381 | 0,385 | 0,388 | 0,392 | 0,396 |
| 21 | 0,419 | 0,423 | 0,427 | 0,431 | 0,435 |
| 22 | 0,459 | 0,464 | 0,467 | 0,471 | 0,475 |
| 23 | 0,500 | 0,505 | 0,509 | 0,514 | 0,518 |
| 24 | 0,544 | 0,549 | 0,553 | 0,558 | 0,562 |
| 25 | 0,589 | 0,594 | 0,599 | 0,603 | 0,608 |
| 26 | 0,637 | 0,641 | 0,646 | 0,651 | 0,656 |
| 27 | 0,686 | 0,691 | 6,696 | 0,701 | 0,706 |
| 28 | 0,736 | 0,742 | 0,747 | 0,752 | 0,757 |
| 29 | 0,789 | 0,794 | 0,800 | 0,805 | 0,811 |
| 30 | 0,843 | 0,849 | 0,854 | 0,860 | 0,866 |

## A Table for the Gauging

### Parts of Inches.

| Inches | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| | G pts | G.pts | G.pts | G.pts | G.pts |
| 31 | 0.871 | 0.877 | 0,883 | 0,888 | 0,894 |
| 32 | 0.928 | 0,934 | 0,940 | 0,946 | 0,952 |
| 33 | 0.987 | 0,993 | 0,999 | 1,005 | 1,011 |
| 34 | 1.048 | 1,054 | 1,061 | 1,067 | 1,073 |
| 35 | 1.111 | 1,117 | 1,123 | 1.130 | 1,136 |
| 36 | 1.175 | 1,181 | 1,188 | 1,195 | 1,201 |
| 37 | 1.241 | 1,248 | 1,255 | 1,261 | 1,268 |
| 38 | 1.309 | 1,316 | 1,323 | 1,330 | 1,337 |
| 39 | 1,379 | 1,386 | 1,399 | 1,400 | 1,407 |
| 40 | 1.449 | 1,457 | 1,465 | 1,472 | 1,480 |
| 41 | 1.524 | 1,532 | 1,539 | 1,547 | 1,555 |
| 42 | 1.599 | 1,607 | 1,615 | 1,622 | 1,630 |
| 43 | 1.676 | 1,684 | 1,692 | 1.700 | 1,708 |
| 44 | 1.755 | 1,763 | 1,771 | 1,779 | 1,787 |
| 45 | 1.836 | 1,844 | 1,852 | 1,861 | 1,869 |
| 46 | 1.919 | 1,927 | 1,935 | 1,944 | 1,952 |
| 47 | 2.003 | 2,011 | 2,020 | 2.029 | 2,037 |
| 48 | 2.089 | 2,098 | 2,106 | 2,115 | 2,123 |
| 49 | 2.177 | 2,186 | 2,194 | 2,203 | 2,212 |
| 40 | 2.266 | 2,275 | 2,285 | 2,294 | 2,303 |
| 51 | 2.358 | 2,367 | 2,377 | 2,386 | 2,395 |
| 52 | 2,451 | 2,460 | 2,470 | 2,480 | 2,489 |
| 53 | 2.546 | 2,556 | 2,566 | 2,576 | 2,586 |
| 54 | 2.644 | 2,654 | 2,663 | 2,673 | 2,683 |
| 55 | 2.743 | 2,752 | 2,762 | 2.772 | 2,782 |
| 56 | 2.842 | 2,853 | 2,863 | 2,873 | 2,883 |
| 57 | 2.946 | 2,956 | 2,966 | 2,977 | 2,987 |
| 58 | 3.050 | 3,060 | 3,071 | 3,081 | 3,091 |
| 59 | 3.156 | 3,166 | 3,177 | 3,188 | 3,198 |
| 60 | 3.264 | 3,274 | 3,285 | 3,296 | 3,307 |

*of Beer or Ale Vessels.*

*Parts of Inches.*

| 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|
| G.pts | G.p's | G.pts | G.pts | G p's |
| 0,900 | 0,905 | 0,911 | 0,917 | 0,923 |
| 0,968 | 0,964 | 0,969 | 0,975 | 0,981 |
| 1,017 | 1,024 | 1,030 | 1,036 | 1,042 |
| 1,079 | 1,084 | 1,092 | 1,098 | 1,104 |
| 1,143 | 1,149 | 1,155 | 1,162 | 1,168 |
| 1,208 | 1,215 | 1,221 | 1,228 | 1,234 |
| 1,275 | 1,282 | 1,288 | 1,295 | 1,302 |
| 1,344 | 1,351 | 1,358 | 1,365 | 1,372 |
| 1,415 | 1,422 | 1,429 | 1,436 | 1,443 |
| 1,487 | 1,494 | 1,502 | 1,509 | 1,517 |
| 1,561 | 1,569 | 1,577 | 1,584 | 1,592 |
| 1,633 | 1,645 | 1,653 | 1.661 | 1,669 |
| 1,716 | 1,724 | 1,732 | 1.739 | 1,747 |
| 1,795 | 1,803 | 1,812 | 1.820 | 1,828 |
| 1,877 | 1,885 | 1,893 | 1.902 | 1,910 |
| 1.960 | 1.969 | 1,977 | 1.986 | 1.994 |
| 2,046 | 2,054 | 2,062 | 2.071 | 2,08c |
| 2,133 | 2,142 | 2,150 | 2.159 | 2,168 |
| 2,221 | 2,230 | 2,239 | 2.248 | 2,257 |
| 2,312 | 2,322 | 2,330 | 2.340 | 2,349 |
| 2,405 | 2,414 | 2,423 | 2.433 | 2,442 |
| 2,499 | 2,509 | 2,518 | 2.527 | 2,537 |
| 2,595 | 2,605 | 2,614 | 2.624 | 2,634 |
| 2,693 | 2,703 | 2,713 | 2.723 | 2.732 |
| 2,792 | 2,802 | 2,813 | 2.823 | 2.833 |
| 2,894 | 2,904 | 2,914 | 2,925 | 2,935 |
| 2,998 | 3,008 | 3,018 | 3,028 | 3,037 |
| 3,102 | 3,113 | 3,124 | 3,134 | 3,145 |
| 3,210 | 3,221 | 3,231 | 3,242 | 3,253 |
| 3,318 | 3.329 | 3,340 | 3.351 | 3 362 |

If you would draw this Table into a line to ſet upon a Gauging-Rod, as you did before for the Wine-meaſure, you muſt work after the like proportion, altering the number, which muſt be 272, as was found before.

As 272 to 3, ſo 1 to ——— 1102941176

This number or the 7 firſt figures thereof multiplied by the parts of your line, the ſquare root extracted from that product will give you the length of the Gauge-Line in inches and parts.

| *Parts* | *Squares* | *Roots* | *Inches parts* |
|---|---|---|---|
| 1 | 1102941 | 1050 | 1,050 |
| 10 | 11029411 | 3321 | 3,321 |
| 100 | 110294117 | 10502 | 10,502 |
| 1000 | 1102941176 | 33210 | 33,210 |

But this being ſomewhat troubleſome, I have calculated this table to your hands, ſo that thereby dividing your gauging rod into Inches, and decimal parts, you may eaſily ſet theſe lines upon your Rod, which being truly and handſomely ſet off, will be more ready and exact for uſe than the Tables can be, they giving but to the 10th part of an inch, this viſibly ſhewing to the 100th part of an inch.

## A Table to divide a Ganging-Rod for Beer Measure.

| Rod. | In. parts | Rod | In parts | Rod | In. parts |
|---|---|---|---|---|---|
| 1 | 1,050 | 160 | 13,284 | 400 | 21,004 |
| 2 | 1,485 | 170 | 13,693 | 410 | 21,265 |
| 3 | 1,819 | 180 | 14,090 | 420 | 21,523 |
| 4 | 2,102 | 190 | 14,476 | 430 | 21,778 |
| 5 | 2,348 | 200 | 14,852 | 440 | 22,029 |
| 6 | 2,572 | 210 | 15,219 | 450 | 22,278 |
| 7 | 2,779 | 220 | 15,577 | 460 | 22,524 |
| 8 | 2,972 | 230 | 15,927 | 470 | 22,768 |
| 9 | 3,151 | 240 | 16,270 | 480 | 23,009 |
| 10 | 3,321 | 250 | 16,605 | 490 | 23,247 |
| 20 | 4,696 | 260 | 16,934 | 500 | 23,483 |
| 30 | 5,752 | 270 | 17,257 | 510 | 23,717 |
| 40 | 6,642 | 280 | 17,573 | 520 | 23,948 |
| 50 | 7,426 | 290 | 17,885 | 530 | 24,178 |
| 60 | 8,135 | 300 | 18,190 | 540 | 24,405 |
| 70 | 8,787 | 310 | 18,491 | 550 | 24,630 |
| 80 | 9,393 | 320 | 18,787 | 560 | 24,852 |
| 90 | 9,963 | 330 | 19,078 | 570 | 25,072 |
| 100 | 10,502 | 340 | 19,365 | 580 | 25,291 |
| 110 | 11,015 | 350 | 19,647 | 590 | 25,509 |
| 120 | 11,504 | 360 | 19,926 | 600 | 25,724 |
| 130 | 11,974 | 370 | 20,201 | 610 | 25,938 |
| 140 | 12,426 | 380 | 20,473 | 620 | 26,150 |
| 150 | 12,562 | 390 | 20,740 | 630 | 26,360 |

If you would draw this Table into a line to set upon a Gauging-Rod, as you did before for the Wine-measure, you must work after the like proportion, altering the number, which must be 272, as was found before.

As 272 to 3, so 1 to ——— 1102941176

This number or the 7 first figures thereof multiplied by the parts of your line, the square root extracted from that product will give you the length of the Gauge-line in inches and parts.

| *Parts* | *Squares* | *Roots* | *Inches parts* |
|---|---|---|---|
| 1 | 1102941 | 1050 | 1050 |
| 10 | 11029411 | 3321 | 3321 |
| 100 | 110294117 | 10502 | 10502 |
| 1000 | 1102941176 | 33210 | 33210 |

But this being somewhat troublesome, I have calculated this table to your hands, so that thereby dividing your gauging rod into Inches, and decimal parts, you may easily set these lines upon your Rod, which being truly and handsomely set off, will be more ready and exact for use than the Tables can be, they giving but to the 10th. part of an inch, this visibly shewing to the 100 part of an inch.

## A Table to divide a Ganging Rod for Beer Measure.

| Rod. | In parts | Rod | In parts | Rod | In parts |
|---|---|---|---|---|---|
| 1 | 1,050 | 160 | 13,284 | 400 | 21,004 |
| 2 | 1,485 | 170 | 13,693 | 410 | 21,265 |
| 3 | 1,819 | 180 | 14,090 | 420 | 21,523 |
| 4 | 2,102 | 190 | 14,476 | 430 | 21,778 |
| 5 | 2,348 | 200 | 14,852 | 440 | 22,029 |
| 6 | 2,572 | 210 | 15,219 | 450 | 22,278 |
| 7 | 2,779 | 220 | 15,577 | 460 | 22,524 |
| 8 | 2,972 | 230 | 15,927 | 470 | 22,768 |
| 9 | 3,151 | 240 | 16,270 | 480 | 23,009 |
| 10 | 3,321 | 250 | 16,605 | 490 | 23,247 |
| 20 | 4,696 | 260 | 16,934 | 500 | 23,483 |
| 30 | 5,752 | 270 | 17,257 | 510 | 23,717 |
| 40 | 6,642 | 280 | 17,573 | 520 | 23,948 |
| 50 | 7,426 | 290 | 17,885 | 530 | 24,178 |
| 60 | 8,135 | 300 | 18,190 | 540 | 24,405 |
| 70 | 8,787 | 310 | 18,491 | 550 | 24,630 |
| 80 | 9,393 | 320 | 18,787 | 560 | 24,852 |
| 90 | 9,963 | 330 | 19,078 | 570 | 25,072 |
| 100 | 10,502 | 340 | 19,365 | 580 | 25,291 |
| 110 | 11,015 | 350 | 19,647 | 590 | 25,509 |
| 120 | 11,504 | 360 | 19,926 | 600 | 25,724 |
| 130 | 11,974 | 370 | 20,201 | 610 | 25,938 |
| 140 | 12,426 | 380 | 20,473 | 620 | 26,150 |
| 150 | 12,862 | 390 | 20,740 | 630 | 26,360 |

*A Table to divide a Gauging Rod for Beer or Ale measure.*

| Rod | In parts | Rod. | In parts | Rod | In |
|---|---|---|---|---|---|
| 640 | 26,568 | 880 | 31,154 | 2200 | 49 |
| 650 | 26,775 | 890 | 31,330 | 2300 | 50 |
| 660 | 26,980 | 900 | 31,506 | 2400 | 51 |
| 670 | 27,184 | 910 | 31,680 | 2500 | 51 |
| 680 | 27,386 | 920 | 31,854 | 2600 | 53 |
| 690 | 27,587 | 930 | 32,027 | 2700 | 54 |
| 700 | 27,786 | 940 | 32,199 | 2800 | 55 |
| 710 | 27,084 | 950 | 32,370 | 2900 | 56 |
| 720 | 28,180 | 960 | 32,540 | 3000 | 57 |
| 730 | 28,375 | 970 | 32,709 | 3100 | 58 |
| 740 | 28,569 | 980 | 32,877 | 3200 | 59 |
| 750 | 28,761 | 990 | 33,044 | 3300 | 60 |
| 760 | 28,952 | 1000 | 33,210 | 3400 | 61 |
| 770 | 29,142 | 1100 | 34,831 | 3500 | 62 |
| 780 | 29,331 | 1200 | 36,380 | 3600 | 63 |
| 790 | 29,519 | 1300 | 37,866 | 3700 | 65 |
| 800 | 29,705 | 1400 | 39,295 | 3800 | 64 |
| 810 | 29,890 | 1500 | 40,675 | 3900 | 65 |
| 820 | 30,073 | 1600 | 42,009 | 4000 | 66 |
| 830 | 30,256 | 1700 | 43,301 | 4 00 | 67 |
| 840 | 30,438 | 1800 | 44,556 | 4200 | 6 |
| 850 | 30,619 | 1900 | 45,778 | 4300 | 68 |
| 860 | 30,799 | 2000 | 46,967 | 4400 | 69 |
| 870 | 30,977 | 2100 | 48,126 | 4500 | 70 |

# Additions of Gauging.

## *Shewing how to Gauge great Tuns.*

Since my first publishing of these Tables of Gauging, there hath been much use (by reason of the Collection of the excise of Beer and Ale) to measure the large Tuns and Vessels of Brewers, that it may be known how many Barrels they hold: therefore I shall adde somewhat concerning this as briefly as I can.

Now these Tuns are either made square or round. If these Tuns be square, then the plain and primary way of measuring them, is to take their length and breadth in feet, or inches; and so multiplying the one by the other, to finde the content of the plain or bottom thereof, for one inch in depth: Then multiplying this by the whole depth measured in inches, you have the whole content of the Tun in square inches: lastly, dividing this by the square inches which are in one Gallon, you may finde how many Gallons it holds, and so easily reduce it into Barrels, or what you will.

If

If these Tuns are round, then you m... measure their Compass and Diameter ... finde out one by the other according to a... and multiply the half of the one, by t... half of the other; So you shall have t... content of the plain or bottom of the T... in square inches; which multiplied by t... Inches of the depth, shews the content o... the whole Tun in square inches: wh... you may reduce and bring into Gallons o... Barrels, as before.

But in the reduction of these squre in... ches into Gallons, there hath been a gre... contest how many square inches are in t... Beer or Ale Gallon. The Collectors of t... Excise would reckon but 272 inches in t... Gallon, according to Mr. *Oughtreds* exp... riment. The more ancient Artist and t... the Coopers allow 288¾ inches, and I sup... pose they are in the right, their scantling... agreeing so well therewith, as I shewed be... fore in the Barrel and Kilderkin; and there... fore I have still retained that number, and... those Tables for the gauging of Barrels... and such like Vessels.

But because it is agreed upon between the... Collectors of Excise, and the Brewers, that... the Gallon should be reckoned to hold 2... square inches, I have therefore framed the... Table for the measuring of these great...

Tuns

Tuns, according to this proportion.

Now this Table being very b ief (having for want of room contracted it into two little pages, which may very well take ten times as much) if you have much the Tuns thereof you may inlarge it as you please; if you be a little the more careful, to observe these directions in the use thereof, it will do your business as well as a larger Table.

For the understanding hereof you must take notice, that this Table is only made even feet, and shews the true quantity the plain, of any square Vessel or Tun, first length and breadth you know, from foot square, to twenty foot square; reckoning the said plain to be but one inch deep. This content is set down in the Table in Barrels and parts of a Barrel, according after this manner.

| | *parts.* |
|---|---|
| *Every Barrel contains* | 10000 |
| *Every Kilderkin contains* | 5000 |
| *Every Firkin contains* | 2500 |
| *Every Gallon contains* | 0278 |
| *Every Pottle contains* | 0139 |
| *Every Quart contains* | 0069½ |
| *Every Pint contains* | 0035 |

*A Table shewing the Content of any square Tun, in Barrels, and 10000 parts.*

*Feet of the length or breadth.*

| Feet of the length or breadth. | XX | XIX | XVIII | XVII | XVI |
|---|---|---|---|---|---|
| | B. prs. | B. prs. | B. prs. | B. prs. | B. prs. |
| 20 | 5,6739 | 5,3900 | 5,1164 | 4,8220 | 4,5330 |
| | | 5,1205 | 4,8511 | 4,5817 | 4,3122 |
| | | | | 4,3466 | 4,0832 |
| | I | | 4,5958 | 4,0994 | 3,8583 |
| 1 | | II | | | 3,6514 |
| 1 | 0,0142 | | | | |
| 2 | 0,0284 | 0,0567 | III | | |
| 3 | 0,0426 | 0,0851 | 0,1277 | IIII | |
| 4 | 0,0567 | 0,1135 | 0,1702 | 0,2270 | V |
| 5 | 0,0709 | 0,1418 | 0,2128 | 0,2837 | 0,3546 |
| 6 | 0,0851 | 0,1702 | 0,2553 | 0,3404 | 0,4255 |
| 7 | 0,0993 | 0,1986 | 0,2979 | 0,3972 | 0,4965 |
| 8 | 0,1135 | 0,2270 | 0,3424 | 0,4539 | 0,5674 |
| 9 | 0,1277 | 0,2553 | 0,3830 | 0,5106 | 0,6383 |
| 10 | 0,1418 | 0,2837 | 0,4255 | 0,5674 | 0,7092 |
| 11 | 0,1560 | 0,3120 | 0,4680 | 0,6241 | 0,7801 |
| 12 | 0,1702 | 0,3404 | 0,5106 | 0,6808 | 0,8510 |
| 13 | 0,1844 | 0,3688 | 0,5532 | 0,7376 | 0,9220 |
| 14 | 0,1986 | 0,3972 | 0,5958 | 0,7944 | 0,9929 |
| 15 | 0,2128 | 0,4254 | 0,6383 | 0,8511 | 1,0638 |
| 16 | 0,2269 | 0,4538 | 0,6809 | 0,9078 | 1,1348 |
| 17 | 0,2411 | 0,4823 | 0,7234 | 0,9646 | 1,2057 |
| 18 | 0,2553 | 0,5106 | 0,7659 | 1,0212 | 1,2766 |
| 19 | 0,2695 | 0,5390 | 0,8085 | 1,0780 | 1,3475 |
| 20 | 0,2837 | 0,5674 | 0,8511 | 1,1348 | 1,4184 |
| | I | II | III | IIII | V |

A Table shewing the content of any square Tun in Barrels, and 10000 parts.

Feet of the length or breadth.

| XV | XIIII | XIII | XII | XI | |
|---|---|---|---|---|---|
| B. pts | B. pts. | B. pts | B. pts. | B. pts. | |
| 4,6554 | 3,9716 | 3,6880 | 3,4044 | 3,1206 | 20 |
| 4,0426 | 3,7731 | 3,5036 | 3,2340 | 2,9645 | 19 |
| 3,8298 | 3,5746 | 3,3192 | 3,0663 | 2,8034 | 18 |
| 3,6172 | 3,3700 | 3,1348 | 2,8934 | 2,6524 | 17 |
| 3,4044 | 3,1774 | 2,9504 | 2,7232 | 2,4964 | 16 |
| 3,1916 | 2,9788 | 2,7660 | 2,5530 | 2,3303 | 15 |
| | 2,7802 | 2,5816 | 2,3828 | 2,1642 | 14 |
| | | 2,3972 | 2,2126 | 2,0282 | 13 |
| VI | | | 2,0424 | 1,8722 | 12 |
| 2,5106 | VII | | | 1,7162 | 11 |
| 2,2978 | 0,9931 | VIII | | | |
| 2,0808 | 0,7944 | 0,5080 | IX | | |
| 1,8680 | 0,8937 | 1,0214 | 1,1489 | X | 1 |
| 1,6511 | 0,9929 | 1,1348 | 1,2766 | 1,4184 | 10 |
| 1,4561 | 1,0921 | 1,2482 | 1,4042 | 1,5603 | 11 |
| 1,2412 | 1,1914 | 1,3616 | 1,5319 | 1,7023 | 12 |
| 1,0264 | 1,2908 | 1,4752 | 1,6596 | 1,8440 | 13 |
| 0,8115 | 1,3901 | 1,5887 | 1,7873 | 1,9858 | 14 |
| 0,5966 | 1,4894 | 1,7022 | 1,9149 | 2,1277 | 15 |
| 0,3818 | 1,5857 | 1,8157 | 2,0426 | 2,2696 | 16 |
| 0,1668 | 1,6880 | 1,9291 | 2,1703 | 2,4114 | 17 |
| 0,9519 | 1,7872 | 2,0425 | 2,2975 | 2,5532 | 18 |
| 0,7370 | 1,8865 | 2,1560 | 2,4255 | 2,6950 | 19 |
| 0,5222 | 1,9859 | 2,2696 | 2,5532 | 2,8368 | 20 |
| VI | VII | VIII | IX | X | 1 |

Feet of the length or breadth.

The use of this Table will most plainly appear, in the answering these questions.

1. Question. *I would know the content of the bottom of a Tun, which is six foot square each way.*

*Answ.* Look where you finde six foot in the side of the Table, and VI foot in the bottom or upper part of the Table meet in a square, and there you shall finde 0,5106, which shews that a Tun being six foot square, holds 0 Barrels, 5106 parts, that is half a Barrel, and a little more. For 5000 parts is a Kilderkin, or half a Barrel, and 106 parts is about three parts over.

2. Question. *A Tun is nine foot one way, and four foot the other way: What is the content?*

*Answ.* Finde where 9 foot in the side of the Table, and IIII foot in the bottom or upper part of the Table meet, and in the square thereof you shall finde 0,5106, which is the same content as before. For as 6 times 6 foot, is 36 foot; so 4 times 9 foot is also 36 foot.

Now you must understand, that this is the content not of the whole Tun, but only of the plain of the bottom thereof; reckoning the depth of the liquor therein to be just one inch. So that if the Tun, or liquor in the Vessel be 10 inches deep, then the

the content thereof will be 10 times as much, *viz.* 05, 1060, that is 5 Barrels, and 1060 parts. If the Tun or depth of the liquor be 20 inches deep, then it is 20 times as much, that is 10, 2120, or 10 Barrels, 2120 parts, and so you must still multiply the content of the bottom of the Tun, by the number of the inches of the depth of the Tun, or Liquor, and it will give you the content of the whole Tun; all beyond the fourth figure being so many Barrels, and the 4 last figures shew the parts under a Barrel.

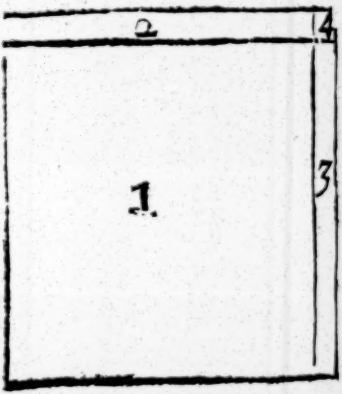
And thus when the length and breadth falls out in even feet, it is very easie to know the contents thereof by this little Table.

But when the length and breadth of these Tuns falls out to be an odde half, or quarter, or third part of a foot, the Table must either be inlarged, or the labour and care in casting it up will be somewhat the more; which you may do well enough by this Table, by allowing the part proportional between the two, or rather the four nearest numbers, which to those used to these Tables, will be very ready and easie.

But if you will be more exact, then divide your measuring Rod, or Ruler, first into feet, and then let every foot be divi-

ded into ten equal parts, which I suppose will be exact enough for this business of measuring.

Then you must suppose the plain or bottom of the Tun you are to measure, to be divided into 4 unequal squares, or parts, as res this manner, expressed by these figures, 1, 2, 3, 4.




The first is the great square made by the even feet.

The second, and third are two long quares on the side of the great square, which are made by the odde parts of the foot, but are equal in length to the great square of even feet.

The

The fourth is the little ſquare in the corner, made only by the odde parts of the foot, over and above the length of the even feet.

Thus, if a Tun be 6 foot and an half ſquare, that is, 6 foot, and 5 parts of your rod on each ſide.

The firſt or great ſquare, will be ſix foot ſquare every way, and the content thereof will be found by the Table as before, to be 36, 5106 parts.

The ſecond ſquare is the long narrow ſquare on the upper ſide of the great ſquare, which is ſix foot long, and half a foot, or ſ ten parts of a foot wide. And the content hereof is found by looking the length thereof, which is ſix foot in the ſide of the Table, and the breadth thereof, which is ſ ten parts of a foot in the bottom of the Table, accounting the Numeral Letters, I, II, III, IIII, V, &c. which before ſtood for feet, now to ſtand but for ten parts of a foot: and taking the number which you finde in the ſquare meeting thereof, caſt off the laſt figure, and ſet the reſt a place forwarder. Now for 6 foot in the ſide, and V parts in the bottom, you ſhall finde 0,4255, which cutting off the laſt figure, it will be 0,0425, which is the content of this long narrow ſquare, mar-

The third ſquare in this example is juſt equal to the former, being ſix foot long, and half a foot broad, and ſo only needs repeating. But if it differ from it, the content thereof muſt be found out as in the other long ſquare.

Laſtly, the 4th. little ſquare in the corner is only half a foot, that is, 5 parts of a foot every way; and the content hereof is found by ſeeking out theſe numbers in the ſide, and the bottom of the Table as before; and cutting off the two laſt figures of the number found. Thus for 5 in the ſide, and V in the bottom, you will finde 0,3546, which cutting off the two laſt figures, will yield 0,0035, for the content thereof.

Now if you adde theſe 4 parts together, they will ſhew the true content of the whole ſquare.

| | B. parts. |
|---|---|
| *The firſt ſquare is* | 0,5106 |
| *The ſecond ſquare is* | 0,0425 |
| *The third ſquare is* | 0,0425 |
| *The 4 ſquare is* | 0,0035 |
| *The ſum of all four is,* | 0,5991 |

Which is the content of the whole ſquare, and if you multiply this by the inches

ches of the depth, it will shew the content of the whole Tun.

Again, if the Tun be longer one way than the other, there will be some difference in the two long side squares, but the operation is the same.

Suppose a Tun, 5 foot, 5 parts one way, and 6 foot 5 parts the other way. To finde the content.

First, in the great square, 5 foot one way, and VI foot the other way, yields 0,4255

Secondly, 5 foot by V parts } yields cutting off the last figure } 0,0255

Thirdly, 6 foot by V parts } yields cutting off the last figure } 0,0425

Fourthly, 5 parts by V parts, yields cutting off the 2 last figures } 0,0035

The Content of all 0,5070

Lastly, if the parts of feet in the breadth of the side squares be not equal, it will be needful to write them down cross wayes.

Thus the Tun being 6 foot 2 parts one way, and 5 foot 8 parts another way.

First, 6 foot by V foot, yields, 0,4125
Then 6 f. 2 pts } that } 6 X 8 } yields } 0,0680
and 5 f. 8 pts } is } 5 X 2 } yields } 0,0141
Lastly, 8 parts by 2 parts, is 0,0022

0,5098

And thus you may finde out the Content of any square Tun whatsoever, multiplying this Content of the bottom by the inches of the depth.

---

*Rules for the measuring of round Tuns, or Vessels.*

First, you must observe whether the Tun be all of one breadth at the top and bottom, or not. If it be of one and the same breadth at the top and the bottom, then it is a Cylinder, and this following Table without any farther trouble readily shews the Content thereof, according to the Inches of the Diameter or breadth thereof, reckoning the liquor therein to be just one inch deep, and this Content is set down in Barrels, and 10000 parts of a Barrel, as before we reckoned in the square Tuns.

A

*A Table, which by the Diameter of a round Tun, shews the content thereof in Barrels, and 10000. parts.*

| | B. | D. | B. | D. | B. | D. | B. |
|---|---|---|---|---|---|---|---|
| | parts. | in. | parts. | in | parts. | inch | parts. |
| 1 | 0,0001 | 31 | 0,0743 | 61 | 0,2879 | 91 | 0,6408 |
| 2 | 0,0003 | 32 | 0,0754 | 62 | 0,2974 | 92 | 0,6549 |
| 3 | 0,0007 | 33 | 0,0843 | 63 | 0,3071 | 93 | 0,6992 |
| 4 | 0,0012 | 34 | 0,0896 | 64 | 0,3169 | 94 | 0,6836 |
| 5 | 0,0019 | 35 | 0,0950 | 65 | 0,3269 | 95 | 0,6982 |
| 6 | 0,0028 | 36 | 0,1005 | 66 | 0,3371 | 96 | 0,7130 |
| 7 | 0,0038 | 37 | 0,1061 | 67 | 0,3474 | 97 | 0,7279 |
| 8 | 0,0050 | 38 | 0,1118 | 68 | 0,3578 | 98 | 0,7430 |
| 9 | 0,0063 | 39 | 0,1177 | 69 | 0,3684 | 99 | 0,7584 |
| 10 | 0,0077 | 40 | 0,1233 | 70 | 0,3791 | 100 | 0,7737 |
| 11 | 0,0094 | 41 | 0,1300 | 71 | 0,3900 | 101 | 0,7893 |
| 12 | 0,0112 | 42 | 0,1364 | 72 | 0,4011 | 102 | 0,8050 |
| 13 | 0,0131 | 43 | 0,1430 | 73 | 0,4124 | 103 | 0,8209 |
| 14 | 0,0152 | 44 | 0,1496 | 74 | 0,4238 | 104 | 0,8369 |
| 15 | 0,0174 | 45 | 0,1566 | 75 | 0,4353 | 105 | 0,8530 |
| 16 | 0,0198 | 46 | 0,1639 | 76 | 0,4469 | 106 | 0,8693 |
| 17 | 0,0223 | 47 | 0,1711 | 77 | 0,4588 | 107 | 0,8858 |
| 18 | 0,0256 | 48 | 0,1784 | 78 | 0,4708 | 108 | 0,9024 |
| 19 | 0,0279 | 49 | 0,1858 | 79 | 0,4830 | 109 | 0,9192 |
| 20 | 0,0308 | 50 | 0,1934 | 80 | 0,4953 | 110 | 0,9361 |
| 21 | 0,0341 | 51 | 0,2012 | 81 | 0,5077 | 111 | 0,9532 |
| 22 | 0,0374 | 52 | 0,2092 | 82 | 0,5203 | 112 | 0,9705 |
| 23 | 0,0409 | 53 | 0,2173 | 83 | 0,5331 | 113 | 0,9880 |
| 24 | 0,0445 | 54 | 0,2256 | 84 | 0,5460 | 114 | 1,0056 |
| 25 | 0,0484 | 55 | 0,2340 | 85 | 0,5591 | 115 | 1,0233 |
| 26 | 0,0523 | 56 | 0,2426 | 86 | 0,5723 | 116 | 1,0411 |
| 27 | 0,0564 | 57 | 0,2514 | 87 | 0,5857 | 117 | 1,0591 |
| 28 | 0,0606 | 58 | 0,2603 | 88 | 0,4992 | 118 | 1,0772 |
| 29 | 0,0650 | 59 | 0,2693 | 89 | 0,6129 | 119 | 1,0955 |
| 30 | 0,0696 | 60 | 0,2785 | 90 | 0,6268 | 120 | 1,1140 |

Thus a round Tun whose Diameter or breadth is 10 foot, or 120 inches, the content for one inch depth is, 1, 1140. that is one Barrel, and 1140. parts. Now if this Tun or the liquor in it be 10 inches deep, then the content thereof is 10 times as much, that is 11, 1400. If it be 20 inches deep, then it is 20 times as much; that is, 22, 2800. and so for any other depth, you must multiply the number found in the Table by the inches of the depth.

But if these Tuns be Comical, that is, narrower at the top than at the bottom, you may take the measure of the Diament at the middle of the Tun, and finde the content by the Table, as before. But this Content will be somewhat less than it should be, and yet no great matter, if the sloaping of the Tun be not much, and the depth not much neither.

But if you will be more exact, you may take the Diameter of the Tun in 2 or 3 places, at every two or three foot of depth, and so finde the content thereof at two or three times, as I shewed before in the measuring of tapering-Timber-page

If you will yet be more exact, you may use Mr. *Oughtreds* way of measuring tapering Timber, which is thus.

First finde the content of the Bases at both

both ends, and multiply the one by the other, and out of the product thereof extract the square root: then adde together the foresaid content of both the Bases, and that square root, and multiply the summe thereof by a third part of the heighth or depth, and the product thereof shall give the content desired.

*Example.*

Let there be a Tun 5 foot or 60 inches deep, the Diameter at the bottom 100 inches, the Diameter at the top 80 inches, the content whereof is to be found.

First, you may finde the content of the Bases by the Table. Thus the Diameter at the bottom being 100 inches, the content thereof is, 0,7737. And the Diameter at the top being 80 inches, the content thereof is 0,4953. Now for the multiplying of these two Bases together, and finding the square root thereof, you may much help your self by the Table of Logarithms, working in this manner.

| | B. parts. | Logarithm. |
|---|---|---|
| The Base at bottom, | 0,7737 | 0,888573 |
| The Base at top, | 0,4953 | 0,694868 |
| The sum. | | 1,583441 |
| The half of this is the Logarithm of the square root | 0,6190 | 0,791720 |
| The sum of the 2 Basis, and this root is | 1,8880 | |
| which multiplied by a 3d. of the depth | 20. inches. | |
| Shews the Content | 37,7600 | |

This is the true and exact content hereof, whereas if you should measure this Tun by the Diameter at the middle thereof, which is 90 inches; the Table shews the content for one inch, to be 0,6268. which multiplied by the depth 60 inches, it will yield for the content only 37, 6080, which is short of the true content, 0,1520. which yet is no great matter, being but 5 Gallons and an half in a Vessel of 37 Barrels.

Lastly, if you measure the Diameter hereof in the midst between the top and the middle, and the bottom, and the middle, as I said before,

So

| | |
|---|---|
| the upper or leſſer Diameter will be | |
| inches, for which the Table gives | 0,5591 |
| which multiplied by 30 inches depth, | 30 |
| yields for the content | 16,7730 |
| and the lower Diameter is 95 inches, which in the Table yields | 0,6982 |
| which multiplied by 30 inches deep, | 30 |
| yields for the content | 20,9460 |
| The ſum of both which together is | 37,7190 |

Which is but 410 parts ſhort of the true content found by the moſt exact way, which is but a Gallon and half ſhort, in 37 or 38 Barrels.

Laſt of all, I finde ſome take the Diameter in the midſt of every foot, and ſo reckon how much every inch deep in that foot holds.

Thus the Diameters and content for the five ſeveral feet of this Tun will be thus.

Diam.

| | *Diam.* | *the Inch.* | *the Foot.* |
|---|---|---|---|
| 1 | 82 | 0,5203 | 6,2436 |
| 2 | 86 | 0,5723 | 6,8676 |
| 3 | 90 | 0,6262 | 7,5216 |
| 4 | 94 | 0,6836 | 8,2032 |
| 5 | 98 | 0,7430 | 8,9160 |
| | *The Content in all* | | 37,7520 |

which wants but 240 parts, which is the one Gallon of the true content.

There remains now only the casting up, of what is due for the Excise, in which this Table will direct you.

## Table of the Excise to be paid for Beer and Ale.

| The number of Barrels. | Strong Ale is to pay 2l. 1os. the Score, reckoning 22 Barrels to the score. | | | | Strong Beer is to pay 2l. 1os. the score reckoning 23 Barrels to the score. | | | | Small Beer is to pay 10s the Score, reckoning 23 Barrels to the Score. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. | q. | li. | sh. | d. | q. | li. | sh. | d. | q. |
| 1 | 00 | 02 | 03 | 1 | 00 | 02 | 02 | 0 | 00 | 00 | 05 | 0 |
| 2 | 00 | 04 | 06 | 2 | 00 | 04 | 04 | 0 | 00 | 00 | 10 | 1 |
| 3 | 00 | 06 | 09 | 3 | 00 | 06 | 06 | 1 | 00 | 01 | 03 | 2 |
| 4 | 00 | 09 | 01 | 0 | 00 | 08 | 08 | 1 | 00 | 01 | 08 | 3 |
| 5 | 00 | 11 | 04 | 1 | 00 | 10 | 10 | 1 | 00 | 02 | 02 | 0 |
| 6 | 00 | 13 | 07 | 2 | 00 | 13 | 00 | 2 | 00 | 02 | 07 | 1 |
| 7 | 00 | 15 | 10 | 3 | 00 | 15 | 02 | 2 | 00 | 03 | 00 | 2 |
| 8 | 00 | 18 | 02 | 0 | 00 | 17 | 04 | 2 | 00 | 03 | 05 | 3 |
| 9 | 01 | 00 | 05 | 1 | 00 | 19 | 06 | 3 | 00 | 03 | 10 | 3 |
| 10 | 01 | 02 | 08 | 2 | 01 | 01 | 08 | 3 | 00 | 04 | 04 | 0 |
| 20 | 02 | 05 | 05 | 1 | 02 | 03 | 05 | 2 | 00 | 08 | 08 | 1 |
| 30 | 03 | 08 | 02 | 0 | 03 | 05 | 02 | 2 | 00 | 13 | 00 | 2 |
| 40 | 04 | 10 | 10 | 3 | 04 | 06 | 11 | 1 | 00 | 17 | 04 | 2 |
| 50 | 05 | 13 | 07 | 2 | 05 | 08 | 08 | 0 | 01 | 01 | 08 | 3 |
| 60 | 06 | 16 | 04 | 1 | 06 | 10 | 05 | 0 | 01 | 06 | 01 | 0 |
| 70 | 07 | 19 | 01 | 0 | 07 | 12 | 01 | 3 | 01 | 10 | 05 | 0 |
| 80 | 09 | 01 | 09 | 3 | 08 | 13 | 10 | 2 | 01 | 14 | 09 | 1 |
| 90 | 10 | 04 | 06 | 2 | 09 | 15 | 07 | 2 | 01 | 19 | 01 | 2 |
| 100 | 11 | 07 | 03 | 1 | 10 | 17 | 04 | 1 | 02 | 03 | 05 | 3 |
| 200 | 22 | 14 | 06 | 2 | 21 | 14 | 08 | 2 | 04 | 06 | 11 | 2 |
| 300 | 34 | 01 | 09 | 3 | 32 | 12 | 00 | 3 | 06 | 10 | 05 | 1 |
| 400 | 45 | 09 | 01 | 0 | 43 | 09 | 05 | 3 | 08 | 13 | 11 | 0 |
| 500 | 56 | 16 | 04 | 1 | 54 | 06 | 09 | 1 | 10 | 17 | 04 | 3 |
| 600 | 68 | 03 | 07 | 2 | 65 | 04 | 02 | 2 | 13 | 00 | 10 | 2 |
| 700 | 79 | 10 | 10 | 3 | 76 | 01 | 05 | 3 | 15 | 04 | 04 | 1 |
| 800 | 90 | 08 | 02 | 0 | 86 | 18 | 10 | 3 | 17 | 07 | 10 | 0 |
| 900 | 102 | 05 | 05 | 1 | 97 | 16 | 02 | 1 | 19 | 11 | 03 | 3 |
| 1000 | 113 | 12 | 08 | 2 | 108 | 13 | 06 | 2 | 21 | 14 | 09 | 2 |

## *Of Weights.*

THere are two sorts of weights used by us in *England*, the one is called Troy weight, the other is called Avoir-du-poiz, or over-weight. Troy weight is thus ordered by the Statute, but yet the Standard weights are the surest trial of them.

24 grains of Wheat make a penny weight.
20 penny weights make an ounce,
12 ounces make a pound.

So there is 480 grains in the ounce, and 5760 grains in the pound.

By this weight Silver and Gold are constantly weighed, and the Assize of Bread is set down in the Statutes according to this weight.

Also the Apothecaries either do, or should use this weight, only they divide the ounce into other parts and denominations, *viz.*

| | |
|---|---|
| 20 Grains make a Scruple, | 20 gr. |
| 3 Scruples make a Drachme, | 60 gr. |
| 8 Drachmes make an Ounce, | 480 gr. |
| 12 Ounces make a pound. | 5760 gr. |

So that in this ounce, there is also 480 Grains, and therefore it must needs be the same with the Troy Ounce, though many Authors mistake this Ounce for the Avoir-du-

poize ounce, which ſhould have been re heedful therein.

Among the reſt, Mr. *John Penkethman* in Book of the Aſſize of Bread, reckons the t of the Avoir-du-poize weight thus, 20 ains make a Scruple, 3 Scruples a dram, Drams an Ounce, 16 Ounces a Pound. is miſtake of his, and the like of others, me into the like in my former Editions. the beſt is, that he calculates his Tables m a better obſervation, making 73 Oun- Troy, to be equal in weight with 80 unces Avoir-du-poize.

And if you go to work by this obſervati- , and the *Reverſe* or *Back-rule* of *Propor-* you ſhall finde,

As 73 to 80, ſo 480 to 438.

So that if the Troy ounce have 480 grains, Avoir-du-poiz Ounce muſt have but grains.

And this is the ordinary received propor- n between the Troy-weight, and the A- ir-du-poiz, *viz.* 60 pounds Avoir-du- iz are equal to 73 pounds Troy. And 73 ounces Troy are equal to 60 Oun- Avoir-du-poiz. From which proportion ctor *Wybard*'s Experiment differs a little, king 14 li. Avoir-du-poiz to be equal to li. Troy weight; and 51 ounces Troy, be equal to 56 ounces Avoir-du-poiz.

So

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Drams an Ounce, 16 Ounces a Pound.
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me into the like in my former Editions.
the beſt is, that he calculates his Tables
a better obſervation, making 73 Oun-
Troy, to be equal in weight with 80
nces Avoir-du-poize.

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n between the Troy-weight, and the A-
ir-du-poiz, *viz.* 60 pounds Avoir-du-
iz are equal to 73 pounds Troy. And
73 ounces Troy are equal to 60 Oun-
Avoir-du-poiz. From which proportion
dor *Wybard*'s Experiment differs a little,
king 14 li. Avoir-du-poiz to be equal to
li. Troy weight; and 51 ounces Troy,
be equal to 56 ounces Avoir-du-poiz.

So

So that the ounce Troy is greater than the ounce Avoir-du-poiz, but the Troy pound is lesser than the pound Avoir-du-poiz.

But now for the parts and denominations of the Avoir-du-poiz weight, we must find out some other rule, and I observe it is the nature of this weight, to take the whole great weight, which is either the Hundred, Pound, or Ounce (for the first foundation) and so to go downward, lessening still by half.

Thus the first great weight being 112 pounds, is called the Hundred.

The half of this being

- 56 pounds is called the half hundred.
- 28 pounds is the quarter of the hundred.
- 14 pounds half a quarter.
- 7 pounds.
- 4 pounds.
- 2 pounds.
- 1 *li.* is called one pound.
- *half a li.* is half a pound.
- *one quarter of a li.* is a quarter.
- *one eigth of a li.* is half a quarter.
- *one sixteenth* is called an ounce.
- *half* an ounce.
- *a quarter* of an ounce.
- *one eighth* of an ounce is half a quarter.
- *one sixteenth* of an ounce is called a Dram.

So that there is 16 Drams in an Ounce, and 16 ounces in the pound. And with these weights, you may weigh any thing from the weight to a Dram, which you cannot well do with fewer.

There are some other denominations, of the weights in several places, as Stones, Loves, Tods, Rooves, Weights, Loads, Fothers, Tuns, but they are all reduced into these weights, and regulated thereby.

According to these Observations, I have erected these Tables of the Assize of Bread, which are thus to be used.

*The manner of using these Tables of Bread.*

First, you must consider the price of Wheat in the Market, which must neither be of the best, or worst, but of the midling sort of price. Then you must consider whether the Baker be a Free-man of the City or Corporation Town or not; for Free-men are allowed two shillings more upon the Quarter, which is three pence in the Bushel more for profit, than others which are not so: the one being allowed six shillings on a quarter, the other but four. These allowances are already abated for, in these Tables, so that without any farther allowance, finde the price of Wheat on the one side

side of the Table for free Bakers, or on the other side for Forreigners, and in the middle you have the several weights, of the penny White, Wheaten, and Houshold Loaves.

And the Law is very strict against Bakers in case of offending. For if the Major or Bailiff finde their Bread too light, they may take it away and give it to the poor of the Town, or Parish. And by the Statute of *Hen.* 3. 51. and *Eliz.* 31. If a Baker want but one Ounce in 36 of this Assize, for the first, second, and third fault, he may be amerced; but for the fourth fault he is to be set in the Pillory without redemption.

## Table of the Assize of Bread by Troy weight.

| Ounces Weight of a penny Loaf. | | | | | | 20 penny w. in one ounce | |
|---|---|---|---|---|---|---|---|
| ue li. | Wotte. | | Wheat. | | Housh. | | |
| sh. | oz. d. | | oz. | d | oz. | d. | sh. d. |
| 2 | 0 | 15 07 | 23 | 01 | 30 | 15 | 2 3 |
| 2 | 3 | 14 02 | 21 | 03 | 28 | 0 | 2 6 |
| 2 | 6 | 13 00 | 19 | 10 | 26 | 00 | 2 9 |
| 2 | 9 | 12 01 | 18 | 02 | 24 | 03 | 3 0 |
| 3 | 0 | 11 05 | 16 | 18 | 22 | 11 | 3 3 |
| 3 | 3 | 10 11 | 15 | 17 | 21 | 03 | 3 6 |
| 3 | 6 | 9 19 | 14 | 18 | 19 | 18 | 3 9 |
| 3 | 9 | 9 09 | 14 | 02 | 18 | 16 | 4 0 |
| 4 | 0 | 8 18 | 13 | 07 | 17 | 16 | 4 3 |
| 4 | 3 | 8 09 | 12 | 13 | 16 | 18 | 4 6 |
| 4 | 6 | 8 01 | 12 | 01 | 16 | 02 | 4 9 |
| 4 | 9 | 7 13 | 11 | 10 | 15 | 07 | 5 0 |
| 5 | 0 | 7 07 | 11 | 00 | 14 | 14 | 5 3 |
| 5 | 3 | 7 01 | 10 | 11 | 14 | 02 | 5 6 |
| 5 | 6 | 6 15 | 10 | 03 | 13 | 10 | 5 9 |
| 5 | 9 | 6 10 | 9 | 15 | 13 | 00 | 6 0 |
| 6 | 0 | 6 05 | 9 | 08 | 12 | 10 | 6 3 |
| 6 | 3 | 6 00 | 9 | 01 | 12 | 01 | 6 6 |
| 6 | 6 | 5 16 | 8 | 15 | 11 | 03 | 6 9 |
| 6 | 9 | 5 12 | 8 | 09 | 11 | 05 | 7 0 |
| 7 | 0 | 5 09 | 8 | 03 | 10 | 18 | 7 3 |
| 7 | 3 | 5 05 | 7 | 18 | 10 | 11 | 7 6 |
| 7 | 6 | 5 02 | 7 | 13 | 10 | 05 | 7 9 |
| 7 | 9 | 4 19 | 7 | 09 | 9 | 19 | 8 0 |
| 8 | 0 | 4 16 | 7 | 05 | 9 | 13 | 8 3 |
| 8 | 3 | 4 14 | 7 | 01 | 9 | 08 | 8 6 |
| 8 | 6 | 4 11 | 6 | 17 | 9 | 02 | 8 9 |
| 8 | 9 | 4 9 | 6 | 13 | 8 | 18 | 9 0 |
| 9 | 0 | 4 6 | 6 | 10 | 8 | 13 | 9 3 |
| 9 | 3 | 4 4 | 6 | 06 | 8 | 09 | 9 6 |
| 9 | 6 | 4 2 | 6 | 03 | 8 | 05 | 9 9 |
| 9 | 9 | 4 0 | 6 | 00 | 8 | 00 | 10 0 |

The price of the Bushel of wheat for Foreigners.

## A Table of the Assize of Bread by Avoir-du-poiz weight.

| 16 ounces in the li. | Weight of a peny Loaf. | | | | | | 16 drams in an ounce. |
|---|---|---|---|---|---|---|---|
| | White. | | Wheat. | | Housh | | |
| The price of the Bushel of Wheat for Free Town-Bakers. | | | | | | | The price of the Bushel of Wheat for Forreigners. |
| sh. | d. | oz. | d. | oz. | d. | sh. | d. |
| 2 | 0 | 16 | 13 | 25 | 04 | 33 | 11 | 2 | 3 |
| 2 | 3 | 15 | 07 | 23 | 03 | 30 | 14 | 2 | 6 |
| 2 | 6 | 14 | 04 | 21 | 01 | 28 | 08 | 2 | 9 |
| 2 | 9 | 13 | 03 | 19 | 13 | 26 | 07 | 3 | 0 |
| 3 | 0 | 12 | 03 | 18 | 0 | 24 | 11 | 3 | 3 |
| 3 | 3 | 11 | 09 | 17 | 06 | 23 | 03 | 3 | 6 |
| 3 | 6 | 10 | 14 | 16 | 05 | 21 | 13 | 3 | 9 |
| 3 | 9 | 10 | 05 | 15 | 07 | 20 | 09 | 4 | 0 |
| 4 | 0 | 9 | 12 | 14 | 10 | 19 | 08 | 4 | 3 |
| 4 | 3 | 9 | 04 | 13 | 14 | 18 | 08 | 4 | 6 |
| 4 | 6 | 8 | 13 | 13 | 04 | 17 | 10 | 4 | 9 |
| 4 | 9 | 8 | 07 | 12 | 10 | 16 | 14 | 5 | 0 |
| 5 | 0 | 8 | 01 | 12 | 01 | 16 | 02 | 5 | 3 |
| 5 | 3 | 7 | 11 | 11 | 09 | 15 | 07 | 5 | 6 |
| 5 | 6 | 7 | 06 | 11 | 02 | 14 | 13 | 5 | 9 |
| 5 | 9 | 7 | 02 | 10 | 11 | 14 | 02 | 6 | 0 |
| 6 | 0 | 6 | 14 | 10 | 04 | 13 | 11 | 6 | 3 |
| 6 | 3 | 6 | 10 | 9 | 15 | 13 | 04 | 6 | 6 |
| 6 | 6 | 6 | 06 | 9 | 09 | 12 | 12 | 6 | 9 |
| 6 | 9 | 6 | 03 | 9 | 04 | 12 | 06 | 7 | 0 |
| 7 | 0 | 5 | 15 | 8 | 15 | 11 | 15 | 7 | 3 |
| 7 | 3 | 5 | 12 | 8 | 11 | 11 | 09 | 7 | 6 |
| 7 | 6 | 5 | 09 | 8 | 06 | 11 | 03 | 7 | 9 |
| 7 | 9 | 5 | 07 | 8 | 03 | 10 | 14 | 8 | 0 |
| 8 | 0 | 5 | 04 | 7 | 15 | 10 | 09 | 8 | 3 |
| 8 | 3 | 5 | 02 | 7 | 12 | 10 | 05 | 8 | 6 |
| 8 | 6 | 5 | 00 | 7 | 08 | 10 | 00 | 8 | 9 |
| 8 | 9 | 4 | 14 | 7 | 05 | 9 | 12 | 9 | 0 |
| 9 | 0 | 4 | 12 | 7 | 02 | 9 | 08 | 9 | 3 |
| 9 | 3 | 4 | 10 | 6 | 15 | 9 | 04 | 9 | 6 |
| 9 | 6 | 4 | 08 | 6 | 12 | 9 | 00 | 9 | 9 |
| 9 | 9 | 4 | 06 | 6 | 10 | 8 | 12 | 10 | 0 |

## *Of Liquid or wet Measures.*

THere are four Measures for Liquid things in moſt uſe, the Pint, the Quart, the Pottle, and the Gallon. Other greater things being more properly veſſels to hold Liquor, than to meaſure it. Theſe are either doubled from the leſſer, or halfed from the greater, ſo that

Two Pints make a Quart,
Two Quarts make a Pottle,
Two Pottles make a Gallon.

or

half a Gallon is a Pottle.
half a Pottle is a Quart.
half a Quart is a Pint.

*Or more fully thus.*

| | *Pints* | *Quarts.* | *Pottles.* |
|---|---|---|---|
| One Gallon are | 8 | 4 | 2 |
| Pottle | 4 | 2 | 1 |
| Quart | 2 | 1 | 0 |

I ſhewed before there is ſuch a difference betwixt Meaſures for Beer and Wine, as there is between 4 and 5, ſo that 4 Gallons of Beer meaſure is 5 of Wine meaſure.

Now our Beer and Ale is usually reckoned, and sold by Barrels, Kilderkins, and Firkins.

If you would know how many Gallons, Quarts, or Pints are in any of these, these Tables will shew you.

*For Beer Vessels.*

| | *Pints.* | *Quarts.* | *Pottles.* | *Gallons.* |
|---|---|---|---|---|
| A Barrel is | 288 | 144 | 72 | 36 |
| A Kilderkin is | 144 | 72 | 36 | 18 |
| A Firkin is | 72 | 36 | 18 | 9 |

*For Ale Vessels.*

| | | | | |
|---|---|---|---|---|
| A Barrel holds | 256 | 128 | 64 | 32 |
| A Kild. holds | 128 | 64 | 32 | 16 |
| A Firkin holds | 64 | 32 | 16 | 8 |

But this you may see, that as the Proverb saith, *Many hands* (so many mouths) *make quick work*. For there being but 118 quarts in a Barrel of Ale, 144 quarts in a Barrel of Beer, a Company of Souldiers which are usually 130 or 140 men, may very well drink it up, it being but each man his quart. And by this you may in some sort know what will furnish a greater Army, or Navy. For a Man of War having 250 men aboard, spends a Tun of Beer every day, each man being allowed his Kan, which is about a wine Gallon.

Wine

*Wine Vessels with their Contents are thus.*

| | Pints. | Quarts, | Pot. | Gall. |
|---|---|---|---|---|
| A Tun is | 2016 | 1008 | 504 | 252 |
| A Pipe or But | 1008 | 504 | 252 | 126 |
| A Punchion | 672 | 336 | 168 | 84 |
| A Hogshead holds | 504 | 252 | 126 | 63 |
| A Tierce of a Pipe | 336 | 168 | 84 | 42 |
| A half Hogshead | 252 | 126 | 63 | 31½ |
| A Rundlet holds | 144 | 72 | 36 | 18 |

It is commonly thought, that a Pint of Wine or Water weigheth a pound Troy, but it will be found rather to weigh a pound Avoir-du-poiz. For Doctor *Wybard* having two or three experiments about this, by the Standard-Gallon at *Guild-Hall*, found that a Wine-Gallon of Water weighed 8 li. 7 ounce, 11 Drams by Avoir-du-poiz weights at *Guild-Hall*, whereas it weighed 9 pound 3 ounces, 1 Dram, 1 quarter by the Troy weights at *Goldsmiths-Hall*. So that a pint of water is 1 pound and a quarter of an ounce by Avoir-du-poiz. But by other mens observations it is found somewhat above, viz. that a pint of Wine should weigh one pound, and about half an ounce, yet Wine somewhat lighter than Water, as there is also some difference in the weight of waters though not much.

And according to some Observations this

way, methinks the Content of a Vessel might in some sort (though not altogether so exactly) be known, as well as by Gauging.

To this end take these Observations, which were given me, and you may make trial and use of them as you finde them.

| *Names of the Vessels.* | *Wine Gallons* | *Tare* C. q. li. | *Weight.* C. q. li. |
|---|---|---|---|
| Rundlet contains | 18½ | 0 0 23 | 1 1 14 |
| Beer Barrel | 45 | 0 2 0 | 3 1 11 |
| Half Hogshead | 31½ | 0 1 22 | 2 1 12 |
| Tierce | 42 | 0 2 14 | 3 0 14 |
| Rochel Hogshead | 46 | 0 2 17 | 3 1 20 |
| High-Countrey Hogshead | 54 | 0 2 27 | 4 0 6 |
| Graves Hogshead | 63 | 0 3 6 | 4 2 22 |
| Punchion | 84 | 0 3 22 | 6 1 2 |
| Maligo But | 112 | 1 0 18 | 8 1 12 |
| Canary Pipe | 116 | 1 0 20 | 8 2 17 |
| Malmsby Butt | 126 | 1 1 0 | 9 1 17 |

This may be further improved by considering the weight of other things compared together, which I finde thus set down in *Gerard Malynes, Lex Mercatoria*, pag. 30.

The

The *Amphora* of the *Romans* weights in *Antwerp* weights, thereof 112l. at *London* makes 107⅝ at *Antwerp*.

| | li. |
|---|---|
| Of Wine, or rain water | 50 |
| Of River-water | 53 |
| Of Oyl or Butter | 45 |
| Of Beans and Peafe | 35 |
| Of Linfeed Oyl | 39 |
| Of Corn | 40 |
| Of Almonds | 42 |
| Of Raifins | 49 |
| Of Figs and Chefnuts | 67 |
| Of Honey | 75 |
| Of Quick-filver | 850 |

## *Of Dry Meafures.*

Corn or Grain is meafured by Gallons, but this Gallon is neither the Wine Gallon nor the Ale Gallon; but in the midft between both, they being in proportion as 28, to 35. The common names and content of the Meafures of thefe things are thus.

| | *A Laft.* | *Quar.* | *Cornook.* | *Strike.* | *Buffs.* |
|---|---|---|---|---|---|
| Lasts | 5120 | 512 | 256 | 128 | 64 |
| Quarts | 2560 | 256 | 128 | 64 | 32 |
| Tuntes | 1280 | 128 | 84 | 32 | 16 |
| Gallons | 640 | 64 | 32 | 16 | 8 |
| Firkins | 320 | 32 | 16 | 8 | 4 |
| Bufhels | 80 | 8 | 4 | 2 | 1 |
| Strikes | 40 | 4 | 2 | 1 | |
| Cornooks | 20 | 2 | 1 | | |
| Quarters. | 10 | 1 | | | |

By this you may see that 500 men, may very well spend a quarter of Wheat every day, it being but about a li. for each man. And a Regiment of Horse being about 600 may spend a Last, or ten Quarters of Oats every day, it being but little above a Gallon, or half a Peck for each Horse, *viz.* 640 Gallons. By this a Governor of a Castle may guess, how to furnish a place with these things, to hold out any time; or may know how long he is able to hold out, with the Provision he hath.

Sea Coals and Salt are also measured by these Pecks and Bushels, but then they are either heaped, or else there is allowed five striked Pecks to the Bushel, and this is called water-measure. Thirty and six such heaped Bushels are a Chaldron of Coals; yet on Shipboard they allow 21 Chaldron to the Score.

---

## *Observations about Gold, Silver, and the other Mettals.*

### *Gold is the most worth of any Mettal.*

### *The worth of Gold.*

Of

Of Gold.

| | | li. | s. | d. | q. |
|---|---|---|---|---|---|
| One pound weight | Troy is worth | 40 | 0 | 0 | 0 |
| One ounce | | 3 | 6 | 8 | 0 |
| One penny-weight | | 0 | 3 | 4 | 0 |
| One Grain | | 0 | 0 | 1 | 2 |

This is the price of ordinary Gold.

Angel Gold is worth somewhat more, and Sovereign Gold somewhat less.

*The worth of Silver.*

| | | li. | s. | d. | q. |
|---|---|---|---|---|---|
| One pound weight | Troyis worth | 3 | 0 | 0 | 0 |
| One Ounce | | 0 | 5 | 0 | 0 |
| One penny-weight | | 0 | | 3 | 0 |
| One Grain | | 0 | 0 | 0 | 0 2/3 |

*But of English Coin.*

| | | li. | s. | d. | q. |
|---|---|---|---|---|---|
| Of Gold | one pound Troy | 40 | 18 | 4 | 3 |
| Of Silver | weight is worth | 3 | 2 | 0 | 0 |

*And by proportion.*

| | | li. | s. | d. | q. |
|---|---|---|---|---|---|
| Of Gold | One pound weight | 49 | 13 | 8 | 1 |
| Of Silver | Avoir-du-poiz | 3 | 1 | 3 | 2 |

By this account 100l. pound of Silver money weighs 26li. 9 ounces Avoir-du-poiz.

And 100l. in Gold weighs fully two pounds Avoir-du-poiz, and about a quarter of an Ounce over.

As Gold is more worth, so it is more weighty than any other Mettal. So that if you

ſhould caſt 7 Bullets of theſe ſeveral Metals, their weights will have this proportion one to the other.

| | | | |
|---|---|---|---|
| *Gold* | 10000 | *Silver* | 5437 |
| *Quick-ſilver* | 7143 | *Braſs* | 4737 |
| | | *Iron* | 4210 |
| *Lead* | 6053 | *Tin* | 3895 |

Hence there may be a good Experiment for the Trial of counterfeit Gold. For Gold being heavier than Lead by about a third part, and heavier than Silver by about an half, no counterfeit pence can be made of theſe or any Mettals which are lighter, but the difference may be diſcerned, and ſuſpected either by the breadth or thickneſs.

But if this difference be not thus diſcerned or only ſuſpected, you may make a more certain trial by weighing it in the water, as *Archimedes* did the golden Crown.

For this is a ſure rule in the Art Statick, that every thing being in the water, doth loſe ſo much of his proper weight, as the quantity or bulk of ſo much water doth weigh: ſo that Gold being ſcarce half the quantity of Braſs or Silver, doth ſcarce loſe half ſo much of its weight in the water, as Silver or Braſs will. As you may ſee plainly by weighing a twenty ſhillings piece againſt his Braſs weight in the water; let the ſcales be made to ſtand never ſo equal with them

them out of the water; yet put them in o
a pail of water, and weigh them there, and
the Gold will weigh 10 or 12 grains hea-
vier than the brass weight.

And this putting of things into water may
be of good use to measure small irregular
bodies. For either by the rising of the wa er
in the Vessel, or by the over-flowing of the
water, and weighing it, or rather measuring
it in a fit vessel of some regular form, you
may know the true quantity of the thing
you desire.

And if the body to be measured be great,
you may make a little model thereof, al-
lowing an inch, or a quarter of an inch for
every foot. And thus you may know the
burden or weight of any Ship.

If you want a fit vessel to measure the wa-
ter in, you may make use of Dr. *Wybard*'s
Experiment concerning the weight of wa-
ter, viz.

*In Inch Measure.*

The ounce Troy of water, is one inch
3949 parts, of solid measure.

The ounce Avoir-du-poiz, is one inch
3756 parts.

*In foot Measure.*

| | *F. parts.* |
|---|---|
| The ounce Troy of water is | 0,001096. |
| The ounce Avoir-du-poiz, is | 0,00099859 |

In

*In Inch Measure.*

| | Inch. Parts |
|---|---|
| The pound Troy of Water, is | 22.7368. |
| The pound Avoir-du-poiz, is | 27. 609. |

*In foot Measure.*

| | F. Parts |
|---|---|
| The pound Troy of water is | 0,013158 |
| The pound Avoir-du-poiz, is | 0,115917 |

A foot square of water is 912 ounces Troy weight, which is 76 li Troy. And the same in Avoir-du-poiz weight is 62 li. 588 parts, which is 62 li. 9 ounces, 6 Drams, and an half.

And though there may be some difference between Rain Water, River Water, and Fountain Water, yet the difference is not so much as *Sucllius* makes it, *viz.* as 1000000 to 1007522. But the greatest difference Dr. *Wybard* could finde, trying by several waters, was only as 1000000 to 1002104, being about 2 in 1000.

There is one Experiment more, concerning the finding of the time of the day, by those metals, which is approved of by the experience and judgment of many.

Having a Gold Ring and a Silver drinking Boul, take a small thred or silk, and measure the compass of the top of the silver Boul, which will be a convenient length for your use; then put this thred through the

the Ring, and tie the ends thereof together, taking up as little as you can with the knots. Put this thred over your thumb, so that it may hang upon the lower jeynt of your thumb where you feel the Pulse beat; Then stretch out your hand, and hold it so that the inside of your thumb may be upward, and hold your hand so over the Boul, that the Ring may hang as near the midst of the Boul as you can guess. And thus holding your hand a while, as still as you can, you shall see that the beating of your Pulse will give a motion to the Ring, causing it to swing cross the Boul by degrees more and more, till at last it will beat against the sides thereof: Now mark when it begins to strike, and tell the strokes as you would a Clock, for it will strike what hour of the day or night it is, and then leave off striking, and swinging also by degrees.

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*A Table of Multiplication:*
Or,
*Arithmetical proportion.*

A

## A Table of Arithmetical Proportions.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 |
| 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 |
| 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 |
| 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 |
| 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 |
| 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 |
| 13 | 26 | 39 | 52 | 65 | 78 | 91 | 104 | 117 | 130 |
| 14 | 28 | 42 | 56 | 70 | 84 | 98 | 112 | 126 | 140 |
| 15 | 30 | 45 | 60 | 75 | 90 | 105 | 120 | 135 | 150 |
| 16 | 32 | 48 | 64 | 80 | 96 | 112 | 128 | 144 | 160 |
| 17 | 34 | 51 | 68 | 85 | 102 | 119 | 136 | 153 | 170 |
| 18 | 36 | 54 | 72 | 90 | 108 | 126 | 144 | 162 | 180 |
| 19 | 38 | 57 | 76 | 95 | 114 | 133 | 152 | 171 | 190 |
| 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 |
| 21 | 42 | 63 | 84 | 105 | 126 | 147 | 168 | 189 | 210 |
| 22 | 44 | 66 | 88 | 110 | 132 | 154 | 176 | 198 | 220 |
| 23 | 46 | 69 | 92 | 115 | 138 | 161 | 184 | 207 | 230 |
| 24 | 48 | 72 | 96 | 120 | 144 | 168 | 192 | 216 | 240 |
| 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 |
| 26 | 52 | 78 | 104 | 130 | 156 | 182 | 208 | 234 | 260 |
| 27 | 54 | 81 | 108 | 135 | 162 | 189 | 216 | 243 | 270 |
| 28 | 56 | 84 | 112 | 140 | 168 | 196 | 224 | 252 | 280 |
| 29 | 58 | 87 | 116 | 145 | 174 | 203 | 232 | 261 | 290 |
| 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 270 | 300 |
| 31 | 62 | 93 | 124 | 155 | 186 | 217 | 248 | 279 | 310 |
| 32 | 64 | 96 | 128 | 160 | 192 | 224 | 256 | 288 | 320 |
| 33 | 66 | 99 | 132 | 165 | 198 | 231 | 264 | 297 | 330 |
| 34 | 68 | 102 | 136 | 170 | 204 | 238 | 272 | 306 | 340 |
| 35 | 70 | 105 | 140 | 175 | 210 | 245 | 280 | 315 | 350 |

## A Table of Arithmetical Proportions.

| 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|
| | 72 | 108 | 144 | 180 | 216 | 252 | 288 | 324 | 360 |
| | 74 | 111 | 148 | 185 | 222 | 259 | 296 | 333 | 370 |
| | 76 | 114 | 152 | 190 | 228 | 266 | 304 | 342 | 380 |
| | 78 | 117 | 156 | 195 | 234 | 273 | 312 | 351 | 390 |
| | 80 | 120 | 160 | 200 | 240 | 280 | 320 | 360 | 400 |
| | 82 | 123 | 164 | 205 | 246 | 287 | 328 | 369 | 410 |
| | 84 | 126 | 168 | 210 | 252 | 294 | 336 | 378 | 420 |
| | 86 | 129 | 172 | 215 | 258 | 301 | 344 | 387 | 430 |
| | 88 | 132 | 176 | 220 | 264 | 308 | 352 | 396 | 440 |
| | 90 | 135 | 180 | 225 | 270 | 315 | 360 | 405 | 450 |
| | 92 | 138 | 184 | 230 | 276 | 322 | 368 | 414 | 460 |
| | 94 | 141 | 188 | 235 | 282 | 329 | 376 | 423 | 470 |
| | 96 | 144 | 192 | 240 | 288 | 336 | 384 | 432 | 480 |
| | 98 | 147 | 196 | 245 | 294 | 343 | 392 | 441 | 490 |
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| | 102 | 153 | 204 | 255 | 306 | 357 | 408 | 459 | 510 |
| | 104 | 156 | 208 | 260 | 312 | 364 | 416 | 468 | 520 |
| | 106 | 159 | 212 | 265 | 318 | 371 | 424 | 477 | 530 |
| | 108 | 162 | 216 | 270 | 324 | 378 | 432 | 486 | 540 |
| | 110 | 165 | 220 | 275 | 330 | 385 | 440 | 495 | 550 |
| | 112 | 168 | 224 | 280 | 336 | 392 | 448 | 504 | 560 |
| | 114 | 171 | 228 | 285 | 342 | 399 | 456 | 513 | 570 |
| | 116 | 174 | 232 | 290 | 348 | 406 | 464 | 522 | 580 |
| | 118 | 177 | 236 | 295 | 354 | 413 | 472 | 531 | 590 |
| | 120 | 180 | 240 | 300 | 360 | 420 | 480 | 540 | 600 |
| | 122 | 183 | 244 | 305 | 366 | 427 | 488 | 549 | 610 |
| | 124 | 186 | 248 | 310 | 372 | 434 | 496 | 558 | 620 |
| | 126 | 189 | 252 | 315 | 378 | 441 | 504 | 567 | 630 |
| | 128 | 192 | 256 | 320 | 384 | 448 | 512 | 576 | 640 |
| | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
| | 132 | 198 | 264 | 330 | 396 | 462 | 528 | 594 | 660 |
| | 134 | 201 | 268 | 335 | 402 | 469 | 536 | 603 | 670 |
| | 136 | 204 | 272 | 340 | 408 | 476 | 544 | 612 | 680 |
| | 138 | 207 | 276 | 345 | 414 | 483 | 552 | 621 | 690 |
| | 140 | 210 | 280 | 350 | 420 | 490 | 560 | 630 | 700 |

## A Table of Arithmetical Proportions.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 71 | 142 | 213 | 284 | 355 | 426 | 497 | 568 | 639 | 710 |
| 72 | 144 | 216 | 288 | 360 | 232 | 50 | 576 | 948 | 720 |
| 73 | 146 | 219 | 292 | 365 | 438 | 511 | 584 | 657 | 730 |
| 74 | 148 | 222 | 296 | 370 | 444 | 518 | 592 | 666 | 740 |
| 75 | 150 | 225 | 300 | 375 | 450 | 525 | 600 | 675 | 750 |
| 76 | 152 | 228 | 304 | 380 | 456 | 532 | 608 | 684 | 760 |
| 77 | 154 | 231 | 308 | 385 | 462 | 539 | 616 | 693 | 770 |
| 78 | 156 | 234 | 312 | 390 | 468 | 546 | 624 | 702 | 780 |
| 79 | 158 | 237 | 316 | 395 | 474 | 553 | 632 | 711 | 790 |
| 80 | 160 | 240 | 320 | 400 | 480 | 560 | 640 | 720 | 800 |
| 81 | 162 | 243 | 324 | 405 | 486 | 567 | 648 | 729 | 810 |
| 82 | 164 | 246 | 328 | 410 | 492 | 574 | 656 | 738 | 820 |
| 83 | 166 | 249 | 332 | 415 | 498 | 581 | 664 | 747 | 830 |
| 84 | 168 | 252 | 336 | 420 | 504 | 588 | 672 | 756 | 840 |
| 85 | 170 | 255 | 340 | 425 | 510 | 595 | 680 | 765 | 850 |
| 86 | 172 | 258 | 344 | 430 | 516 | 602 | 688 | 774 | 860 |
| 87 | 174 | 261 | 348 | 435 | 522 | 609 | 696 | 783 | 870 |
| 88 | 176 | 264 | 352 | 440 | 528 | 616 | 704 | 792 | 880 |
| 89 | 178 | 267 | 356 | 445 | 534 | 623 | 712 | 801 | 890 |
| 90 | 180 | 270 | 360 | 450 | 540 | 630 | 720 | 810 | 900 |
| 91 | 182 | 273 | 364 | 455 | 546 | 637 | 728 | 819 | 910 |
| 92 | 184 | 276 | 368 | 460 | 552 | 644 | 736 | 828 | 920 |
| 93 | 186 | 279 | 372 | 465 | 558 | 651 | 744 | 837 | 930 |
| 94 | 188 | 282 | 376 | 470 | 564 | 658 | 752 | 846 | 940 |
| 95 | 190 | 285 | 380 | 475 | 570 | 665 | 760 | 855 | 950 |
| 96 | 192 | 288 | 384 | 480 | 576 | 672 | 768 | 864 | 960 |
| 97 | 194 | 291 | 388 | 485 | 582 | 679 | 776 | 873 | 970 |
| 98 | 196 | 294 | 392 | 490 | 588 | 686 | 784 | 882 | 980 |
| 99 | 198 | 297 | 396 | 495 | 594 | 693 | 792 | 891 | 990 |
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |

The

## *The description and use of the Table of Arithmetical Proportions.*

I May well call it thus, because it is useful in all the parts of Arithmetick; but especially in *The Rule of Proportion*, commonly called, *The Rule of Three.*

First, It is a plain Table of Multiplication, and that not only of the digit Numbers, 1, 2, 3, 4, *&c.* to 10, (which is usual) but to an 100. And if you reckon the single figures at the top of the Table to stand for 10, 20, 30, 40, and 100, and put, or suppose a Cypher to the numbers under them, the Table will reach to 100 square. Thus, at the beginning of the Table you may reckon,

*As* 8 *times* 8 *is* 64, *so* 8 *times* 80 *is* 640.

*Or at the end of the Table.*

*As* 80 *times* 8 *is* 640, *so* 80 *times* 80 *is* 6400

The order of working by this Table, is as in most others, to finde the one of your numbers on the side of the Table, and the other at the head, and in the square of these two you shall finde the product. And thus you shall finde the multiplication of any two num-

numbers under 100, if the one of them have a cypher after it. But now at other times you must make two entrances for it, and so add them together.

Suppose the Roof of an house to be 12 foot and an half broad, on the one side (and so 25 foot on both sides the ridge) and 48 long, how many feet in all? and so how many squares of ten foot square therein? and how many Tiles will cover it.

| | |
|---|---|
| *To multiply the breadth,* | 25 *feet.* |
| *By the length,* | 48 *feet.* |
| *First,* 8 *times* 25 *is* | 200 |
| *And* 4, *or rather* 40 *times* 25 *is* | 1000 |
| *The whole Sum is* | 1200 *feet.* |

Now their square being ten feet every way, contains 100 feet in the whole, so that cutting off the two last figures,
You have 12 squares of Tyling.

Now if you lay your Tyles but 3 inches out, then 800 Tyles will cover one square. But if you lay them 3 inches and an half out (as you may, but must not exceed that) then 750 Tyles will cover one square. Now if 750 Tyles cover one square, how many will cover the whole house, being 12 square?

*First,*

| | |
|---|---|
| *First, you shall finde 2 times 750 is* | 1500 |
| *Then 10 times 750 is* | 7500 |
| *In all* | 9000 |

And so many tyles will cover the whole house.

In like manner, if you know how many Bricks will make a foot, or a yard, or a rod of Wall of one, two, or three Bricks thick, you may easily cast up how many 1000 will build an house, or make a wall round about an Orchard, or a Park. And if you know how much Mortar will lay 1000 Bricks, and how many Bricks a Workman can lay in a day, you may easily count the charge of building of such an House, or Wall.

Suppose 4500 Bricks will make a Rod square of a Wall, whose thickness shall be 9 Inches, or a Brick and an half thick. How many then will build an House, whose height is 3 Rod, and the compass thereof 4 Rods.

*First, multiply* 3 *by* 12, *and it makes* 36 *Rods in all, and multiply this by* 4500

| | |
|---|---|
| 5 *times* 36 *is* | 18000 |
| 4 *times* 36 *is* | 144 |
| *Setting them in their places and adding the Cyphers again, it makes* | 162000 |

Take

Take a question or two of another nature:

A Captain is to receive 60 dayes, or two moneths pay for his Souldiers, being 69 in number, how much will it come to at 8d. a man every day?

This must be all brought first into 8 pences, thus.

You may see by the Table that 69 times 6 is 576, so that 96 times 60, is 5760 eight pences, which you may easily reckon up by the following Table of accounts to be 1918

Many such questions may be answered by this Table, but you shall see that it may be useful to those who are more skilful in multiplication, running over the work by two figures at once, and by careful ordering the figures, avoid much, or all of the carrying, which is troublesome in the ordinary way: as you may see by these few examples.

| | | | |
|---|---|---|---|
| 28.34 | | 19.28.34 | |
| 9 | | 89 | |
| 306 | | 171 | 306 |
| 252 | | | 252 |
| 25506 | | 152 | 272 |
| | | | 224 |
| | | 1716 | 2226 |

The like helps you may finde in Divi-

lad if you would know how many ſhil-
gs are in 108 pence, you muſt divide this
mber by 12, which are the pence in one
lling, which you ſhall do by finding 12
the ſide of the Table, and running along
that line till you finde the ſaid number
, and this is juſt under nine, ſo that it
s there is juſt 9 ſhillings in 108 pence.
now if this number had a Cypher after
it. 1080, then it had been 90 ſhillings.
In like manner, if you would know how
ny Acres are in a piece of Land, whoſe
ent you finde to be 1440 poles. Here
g 160 Poles in one Acre, you muſt di-
this number by 160, which becauſe it
x in the Table, leave out the cypher, and
the number 16, and in this line you
ll finde 144, which by adding your cy-
r again, makes 1440 under 9, ſo that
re are nine Acres in the ſaid field.

Now though money will be better redu-
by the following Table of Accounts, yet
you have occaſion for ſome ſuch common
ſions, you may make a Table of them.

But the chiefeſt uſe of this Table will ap-
r in the *Rule of Proportion*, commonly
led the *Rule of Three*, wherein after the
linary way, you muſt work firſt by Diviſi-

on

on, and then by *Multiplication*, but by this Table many useful Propositions may be performed, by inspection only, without either of them, and the four numbers will fall out in a square posture in the Table.

To this purpose, first finde your first number on the side of the Table; and finde your second number in the same line with it, observing well in which of the Columns it happens; then finde your third Number likewise on the side of the Table under the first number, and in that line, in the very Column where your second number was found, you shall finde the fourth number, which is the thing desired.

Thus you shall finde that,

*As* 10 *to* 60, *so* 25 *to* 150.

which is thus wrought by the Table.

*As* 10 } *in the side* { *to* 60 } *in the sixth*
*So* 25 } *of the table* { *to* 150 } *Columne.*

The like proportion you shall finde though you take your first and third Numbers, not in the first, but in any other Columne.

Thus you shall finde in the beginning of the Table.

*As* 60 } *in the* { *to* 100 } *in the*
*So* 48 } *sixth Co-* { *to* 80 } *last Co-*
*Or* 36 } *lumne* { *to* 60 } *lumne.*

And thus if you leave out the last figure of these

ese two Columns, or rather count them decimal Fractions, they will be a very od Table of reduction between Sexagessi- al and Centessimal parts, for the propor- n will hold either forwards or backwards, thus,

| | | | |
|---|---|---|---|
| 10,0 | *in the* | *to* 6,0 | *in the* |
| 20,0 | *tenth Co-* | *to* 12,0 | *sixth Co-* |
| 30,0 | *lumne* | *to* 18,0 | *lumne* |

Note also, if you change the places of your ond and third numbers, the conclusion ll be the same, both the ordinary way by ithmetick, and by this Table also, yea, ough you finde them in any other Co- mns, yet the square of the Table will e the proportion.

*Thus by Arithmetick.*

*As* 10 *to* 25, *so* 60 *to* 150.

*And by the Table.*

| | | | |
|---|---|---|---|
| 10 | *in the second* | *to* 25 | *in the fifth* |
| 60 | *Columne* | *to* 150 | *Columne.* |

Again, in decimal Fractions, the Table ill very readily shew you the part propor- onal, according to any value of the *Inte-* r, or whole sum. For if you seek the value the whole, either in the first or tenth Co- mne, the 9 other Columns in that line ews the part proportional for each tenth rt.

Thus let the whole number be 120, finde this

this in the Table, and in that line you shall see, that one tenth part of it is 12; two tenth parts are 24; 3 are 36, 4 are 48, &c.

If you finde the value in the first column, then the last figure of these Numbers are to be omitted, or rather reckoned for smaller decimal fractions. Thus the whole being 24, 1 tenth is 2, 4, two tenths are 4, 8. 3 tenths, are 7, 2, &c.

This Table will be of much use in any such cases unto Artists, especially if it were extended to an 100 square every way, as it should be, and as it might be written or Printed in a sheet of large Paper: and so it would be as useful a Table, or Instrument, as an Artist could have.

But to give you a question of another nature, which may be of more general concernment.

Three men adventure several sums of money in one stock: the first 90*l.* the second 210*l.* the third 300*l.* in all 600*l.* and at the return it brings home 1000*l.* what is each mans share?

Here the proportion is as 600 to 1000, which you shall finde at the latter end, of the sixth and tenth Columns, and so finding the rest of the sums in those Columns, their shares will be thus.

| | | | | |
|---|---|---|---|---|
| 600 | | to | 1000 | |
| 90 | in the sixth | to | 150 | in the 10 |
| 210 | Columne | to | 350 | Columa. |
| 300 | | to | 500 | |

And thus you see how most questions, in the parts of Arithmetick may be perfor- by this Table, which with a little use be familiar to you.

---

*large Table of Accounts, for the ready casting up of the true value, of any great number of any Com- modities.*

---

## A Table of Accounts.

| | 1 farthing | | | | 2 farthings | | | | 3 farthings | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. | q. | li. | sh. | d. | q. | li. | sh. | d. | q. |
| 1 | | | | 1 | | | | 2 | | | | 3 |
| 2 | | | | 2 | | | 1 | 0 | | | 1 | 2 |
| 3 | | | | 3 | | | 1 | 2 | | | 2 | 1 |
| 4 | | | 1 | 0 | | | 2 | 0 | | | 3 | 0 |
| 5 | | | 1 | 1 | | | 2 | 2 | | | 3 | 3 |
| 6 | | | 1 | 2 | | | 3 | 0 | | | 4 | 2 |
| 7 | | | 1 | 3 | | | 3 | 2 | | | 5 | 1 |
| 8 | | | 2 | 0 | | | 4 | 0 | | | 6 | 0 |
| 9 | | | 2 | 1 | | | 4 | 2 | | | 6 | 3 |
| 10 | | | 2 | 2 | | | 5 | 0 | | | 7 | 2 |
| 20 | | | 5 | 0 | | | 10 | 0 | | 1 | 3 | 0 |
| 30 | | | 7 | 2 | | 1 | 3 | 0 | | 1 | 10 | 2 |
| 40 | | | 10 | 0 | | 1 | 8 | 0 | | 2 | 6 | 0 |
| 50 | | 1 | 0 | 2 | | 2 | 1 | 0 | | 3 | 1 | 2 |
| 60 | | 1 | 0 | 3 | | 2 | 6 | 0 | | 3 | 9 | 0 |
| 70 | | 1 | 5 | 1 | | 2 | 11 | 0 | | 4 | 4 | 2 |
| 80 | | 1 | 8 | 0 | | 3 | 4 | 0 | | 5 | 6 | 0 |
| 90 | | 1 | 10 | 2 | | 3 | 9 | 0 | | 5 | 7 | 2 |
| 100 | | 2 | 1 | 0 | | 4 | 2 | 0 | | 6 | 3 | 0 |
| 200 | | 4 | 2 | 0 | | 8 | 4 | 0 | | 12 | 6 | 0 |
| 300 | | 6 | 3 | 0 | | 12 | 6 | 0 | | 18 | 9 | 0 |
| 400 | | 8 | 4 | 0 | | 16 | 8 | 0 | 1 | 5 | 0 | 0 |
| 500 | | 10 | 5 | 0 | 1 | 0 | 10 | 0 | 1 | 11 | 3 | 0 |
| 600 | | 12 | 6 | 0 | 1 | 5 | 0 | 0 | 1 | 17 | 6 | 0 |
| 700 | | 14 | 7 | 0 | 1 | 9 | 2 | 0 | 2 | 3 | 9 | 0 |
| 800 | | 16 | 8 | 0 | 1 | 13 | 4 | 0 | 2 | 10 | 0 | 0 |
| 900 | | 18 | 9 | 0 | 1 | 17 | 6 | 0 | 2 | 16 | 3 | 0 |
| 1000 | 1 | 0 | 10 | 0 | 2 | 1 | 8 | 0 | 3 | 2 | 6 | 0 |
| 2000 | 2 | 1 | 8 | 0 | 4 | 3 | 4 | 0 | 6 | 05 | 0 | 0 |
| 5000 | 5 | 4 | 2 | 0 | 10 | 8 | 4 | 0 | 15 | 12 | 6 | 0 |
| 10000 | 10 | 8 | 4 | 0 | 20 | 16 | 8 | 0 | 31 | 5 | 0 | 0 |

## A Table of Accounts.

| | 1 peny. | | | 2 pence | | | 3 pence | | |
|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. | li. | sh. | d. | li. | sh. | d. |
| 1 | | | 1 | | | 2 | | | 3 |
| 2 | | | 2 | | | 4 | | | 6 |
| 3 | | | 3 | | | 6 | | | 9 |
| 4 | | | 4 | | | 8 | | 1 | 0 |
| 5 | | | 5 | | | 10 | | 1 | 3 |
| 6 | | | 6 | | 1 | 0 | | 1 | 6 |
| 7 | | | 7 | | 1 | 2 | | 1 | 9 |
| 8 | | | 8 | | 1 | 4 | | 2 | 0 |
| 9 | | | 9 | | 1 | 6 | | 2 | 3 |
| 10 | | | 10 | | 1 | 8 | | 2 | 6 |
| 20 | | 1 | 8 | | 3 | 4 | | 5 | 0 |
| 30 | | 2 | 6 | | 5 | 0 | | 7 | 6 |
| 40 | | 3 | 4 | | 6 | 8 | | 10 | 0 |
| 50 | | 4 | 2 | | 8 | 4 | | 12 | 6 |
| 60 | | 5 | 0 | | 10 | 0 | | 15 | 0 |
| 70 | | 5 | 10 | | 11 | 8 | | 17 | 6 |
| 80 | | 6 | 8 | | 13 | 8 | 1 | 0 | 0 |
| 90 | | 7 | 6 | | 15 | 0 | 1 | 2 | 6 |
| 100 | | 8 | 4 | | 16 | 8 | | 1 5 | 0 |
| 200 | | 16 | 8 | 1 | 13 | 4 | | 2 10 | 0 |
| 300 | 1 | 5 | 0 | 2 | 10 | 0 | | 3 15 | 0 |
| 400 | 1 | 13 | 4 | 3 | 6 | 8 | | 5 0 | 0 |
| 500 | 2 | 1 | 8 | 4 | 3 | 4 | | 6 5 | 0 |
| 600 | 2 | 10 | 0 | 5 | 0 | 0 | | 7 10 | 0 |
| 700 | 2 | 18 | 4 | 5 | 16 | 8 | 08 | 15 | 0 |
| 800 | 3 | 6 | 8 | 6 | 13 | 4 | | 10 0 | 0 |
| 900 | 3 | 15 | 0 | 7 | 10 | 0 | | 11 5 | 0 |
| 1000 | 4 | 3 | 4 | 8 | 6 | 8 | 12 | 10 | 0 |
| 2000 | 8 | 6 | 8 | 16 | 13 | 4 | 25 | 0 | 0 |
| 5000 | 20 | 16 | 8 | 41 | 13 | 4 | 62 | 10 | 0 |
| 10000 | 41 | 13 | 4 | 83 | 6 | 8 | 125 | 0 | 0 |

## A Table of Accounts.

| Number of Ells, or such like. | 4 pence li. | sh. | d. | 5 pence li. | sh. | d | 6 pence. li. | sh. | d. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 4 | | | 5 | | | 6 |
| 2 | | | 8 | | | 10 | | 1 | 0 |
| 3 | | 1 | 0 | | 1 | 3 | | 1 | 6 |
| 4 | | 1 | 4 | | 1 | 8 | | 2 | 0 |
| 5 | | 1 | 8 | | 2 | 1 | | 2 | 6 |
| 6 | | 2 | 0 | | 2 | 6 | | 3 | 0 |
| 7 | | 2 | 4 | | 2 | 11 | | 3 | 6 |
| 8 | | 2 | 8 | | 3 | 4 | | 4 | 0 |
| 9 | | 3 | 0 | | 3 | 9 | | 4 | 6 |
| 10 | | 3 | 8 | | 4 | 2 | | 5 | 0 |
| 20 | | 6 | 4 | | 8 | 4 | | 10 | 0 |
| 30 | | 10 | 0 | | 12 | 6 | | 15 | 0 |
| 40 | | 13 | 4 | | 16 | 8 | 1 | 0 | 0 |
| 50 | | 16 | 8 | 1 | 0 | 10 | 1 | 5 | 0 |
| 60 | 1 | 0 | 0 | 1 | 5 | 0 | 1 | 10 | 0 |
| 70 | 1 | 3 | 4 | 1 | 9 | 2 | 1 | 15 | 0 |
| 80 | 1 | 6 | 8 | 1 | 13 | 4 | 2 | 0 | 0 |
| 90 | 1 | 10 | 0 | 1 | 17 | 6 | 2 | 5 | 0 |
| 100 | 1 | 13 | 4 | 2 | 1 | 8 | 2 | 10 | 0 |
| 200 | 3 | 6 | 8 | 4 | 3 | 4 | 5 | 0 | 0 |
| 300 | 5 | 0 | 0 | 6 | 5 | 0 | 7 | 10 | 0 |
| 400 | 6 | 13 | 4 | 8 | 6 | 8 | 10 | 0 | 0 |
| 500 | 8 | 6 | 8 | 10 | 8 | 4 | 12 | 10 | 0 |
| 600 | 10 | 0 | 0 | 12 | 10 | 0 | 15 | 0 | 0 |
| 700 | 11 | 13 | 4 | 14 | 11 | 8 | 17 | 10 | 0 |
| 800 | 13 | 6 | 8 | 16 | 13 | 4 | 20 | 0 | 0 |
| 900 | 15 | 0 | 0 | 18 | 15 | 0 | 22 | 10 | 0 |
| 1000 | 16 | 13 | 4 | 20 | 16 | 8 | 25 | 0 | 0 |
| 2000 | 33 | 6 | 8 | 41 | 13 | 4 | 50 | 0 | 0 |
| 5000 | 83 | 6 | 8 | 104 | 3 | 4 | 125 | 0 | 0 |
| 10000 | 166 | 13 | 4 | 208 | 6 | 8 | 250 | 0 | 0 |

## A Table of Accounts.

| Number of Ells, or such like. | 7 pence. li. | sh. | d. | 8 pence li. | sh. | d. | 9 pence. li. | sh. | d. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 7 | | | 8 | | | 9 |
| 2 | | 1 | 2 | | 1 | 4 | | 1 | 6 |
| 3 | | 1 | 9 | | 2 | 0 | | 2 | 3 |
| 4 | | 2 | 4 | | 2 | 8 | | 3 | 0 |
| 5 | | 2 | 11 | | 3 | 4 | | 3 | 9 |
| 6 | | 3 | 6 | | 4 | 0 | | 4 | 6 |
| 7 | | 4 | 1 | | 4 | 8 | | 5 | 3 |
| 8 | | 4 | 8 | | 5 | 4 | | 6 | 0 |
| 9 | | 5 | 3 | | 6 | 0 | | 6 | 9 |
| 10 | | 5 | 10 | | 6 | 0 | | 7 | 6 |
| 20 | | 11 | 8 | | 13 | 4 | | 15 | 0 |
| 30 | | 17 | 6 | 1 | 0 | 0 | 1 | 2 | 6 |
| 40 | 1 | 3 | 4 | 1 | 6 | 8 | 1 | 10 | 0 |
| 50 | 1 | 9 | 2 | 1 | 13 | 4 | 1 | 17 | 6 |
| 60 | 1 | 12 | 0 | 2 | 0 | 0 | 2 | 5 | 0 |
| 70 | 2 | 0 | 10 | 2 | 6 | 8 | 2 | 12 | 6 |
| 80 | 2 | 6 | 8 | 2 | 13 | 4 | 3 | 0 | 0 |
| 90 | 2 | 12 | 6 | 3 | 0 | 0 | 3 | 7 | 6 |
| 100 | 2 | 18 | 4 | 3 | 6 | 8 | 3 | 15 | 6 |
| 200 | 5 | 16 | 8 | 6 | 13 | 4 | 7 | 10 | 0 |
| 300 | 8 | 15 | 0 | 10 | 0 | 0 | 11 | 5 | 0 |
| 400 | 11 | 13 | 4 | 13 | 6 | 8 | 15 | 0 | 0 |
| 500 | 14 | 11 | 8 | 16 | 13 | 4 | 18 | 15 | 0 |
| 600 | 17 | 10 | 0 | 20 | 0 | 0 | 22 | 10 | 0 |
| 700 | 20 | 8 | 4 | 23 | 6 | 8 | 26 | 5 | 0 |
| 800 | 23 | 6 | 8 | 26 | 13 | 4 | 30 | 0 | 0 |
| 900 | 26 | 5 | 0 | 30 | 0 | 0 | 33 | 15 | 0 |
| 1000 | 29 | 3 | 4 | 33 | 6 | 8 | 37 | 10 | 0 |
| 2000 | 58 | 6 | 8 | 66 | 13 | 4 | 75 | 0 | 0 |
| 5000 | 145 | 16 | 8 | 166 | 13 | 4 | 187 | 10 | 0 |
| 10000 | 291 | 13 | 4 | 333 | 6 | 8 | 375 | 0 | 0 |

## A Table of Accounts.

| Number of Ells, or such like. | 10 pence li. | sh. | d. | 11 pence li. | sh. | d. | 12 pence li. | sh. | d. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 10 | | | 11 | | 1 | 0 |
| 2 | | 1 | 8 | | 1 | 10 | | 2 | 0 |
| 3 | | 2 | 6 | | 2 | 9 | | 3 | 0 |
| 4 | | 3 | 4 | | 3 | 8 | | 4 | 0 |
| 5 | | 4 | 2 | | 4 | 7 | | 5 | 0 |
| 6 | | 5 | 0 | | 5 | 6 | | 6 | 0 |
| 7 | | 5 | 10 | | 6 | 5 | | 7 | 0 |
| 8 | | 6 | 8 | | 7 | 4 | | 8 | 0 |
| 9 | | 7 | 6 | | 8 | 3 | | 9 | 0 |
| 10 | | 8 | 4 | | 9 | 2 | | 10 | 0 |
| 20 | | 16 | 8 | | 18 | 4 | 1 | 0 | 0 |
| 30 | 1 | 5 | 0 | 1 | 7 | 6 | 1 | 10 | 0 |
| 40 | 1 | 13 | 4 | 1 | 16 | 8 | 2 | 0 | 0 |
| 50 | 2 | 1 | 8 | 2 | 5 | 10 | 2 | 10 | 0 |
| 60 | 2 | 10 | 0 | 2 | 15 | 0 | 3 | 0 | 0 |
| 70 | 2 | 18 | 4 | 3 | 4 | 2 | 3 | 10 | 0 |
| 80 | 3 | 6 | 8 | 3 | 13 | 4 | 4 | 0 | 0 |
| 90 | 3 | 15 | 0 | 4 | 2 | 6 | 4 | 10 | 0 |
| 100 | 4 | 3 | 4 | 4 | 11 | 8 | 5 | 0 | 0 |
| 200 | 8 | 6 | 8 | 9 | 3 | 4 | 10 | 0 | 0 |
| 300 | 12 | 10 | 0 | 13 | 15 | 0 | 15 | 0 | 0 |
| 400 | 16 | 13 | 4 | 18 | 6 | 8 | 20 | 0 | 0 |
| 500 | 20 | 16 | 8 | 22 | 18 | 4 | 25 | 0 | 0 |
| 600 | 25 | 0 | 0 | 27 | 10 | 0 | 30 | 0 | 0 |
| 700 | 29 | 3 | 4 | 32 | 1 | 8 | 35 | 0 | 0 |
| 800 | 33 | 6 | 8 | 36 | 13 | 4 | 40 | 0 | 0 |
| 900 | 37 | 10 | 0 | 41 | 5 | 0 | 45 | 0 | 0 |
| 1000 | 41 | 13 | 4 | 45 | 16 | 8 | 50 | 0 | 0 |
| 2000 | 83 | 6 | 8 | 91 | 13 | 4 | 100 | 0 | 0 |
| 5000 | 208 | 6 | 8 | 229 | 3 | 4 | 250 | 0 | 0 |
| 10000 | 416 | 13 | 4 | 458 | 6 | 8 | 500 | 0 | 0 |

## A Table of Accounts.

| | 2 shill. | 3 shill. | 4 shill. | 5 shil. |
|---|---|---|---|---|
| | li. sh. | li. sh. | li. sh. | li. sh. |
| 1 | 2 | 3 | 4 | 5 |
| 2 | 4 | 6 | 8 | 10 |
| 3 | 6 | 9 | 12 | 15 |
| 4 | 5 | 12 | 16 | 1 0 |
| 5 | 10 | 15 | 1 0 | 1 5 |
| 6 | 12 | 18 | 1 4 | 1 10 |
| 7 | 14 | 1 1 | 1 8 | 1 15 |
| 8 | 16 | 1 4 | 1 12 | 2 5 |
| 9 | 18 | 1 7 | 1 16 | 2 0 |
| 10 | 1 0 | 1 10 | 2 0 | 2 10 |
| 20 | 2 0 | 3 0 | 4 0 | 5 0 |
| 30 | 3 0 | 4 10 | 6 0 | 7 10 |
| 40 | 4 0 | 6 0 | 8 0 | 10 0 |
| 50 | 5 0 | 7 10 | 10 0 | 12 10 |
| 60 | 6 0 | 9 0 | 12 0 | 15 0 |
| 70 | 7 0 | 10 10 | 14 0 | 17 10 |
| 80 | 8 0 | 12 0 | 16 0 | 20 0 |
| 90 | 9 0 | 13 10 | 18 0 | 22 10 |
| 100 | 10 0 | 15 0 | 20 0 | 25 0 |
| 200 | 20 0 | 30 0 | 40 0 | 50 0 |
| 300 | 30 0 | 45 0 | 60 0 | 75 0 |
| 400 | 40 0 | 60 0 | 80 0 | 100 0 |
| 500 | 50 0 | 75 0 | 100 0 | 125 0 |
| 600 | 60 0 | 90 0 | 120 0 | 150 0 |
| 700 | 70 0 | 105 0 | 140 0 | 175 0 |
| 800 | 80 0 | 120 0 | 160 0 | 200 0 |
| 900 | 90 0 | 135 0 | 180 0 | 225 0 |
| 1000 | 100 0 | 150 0 | 200 0 | 250 0 |
| 2000 | 200 0 | 300 0 | 400 0 | 500 0 |
| 5000 | 500 0 | 750 0 | 1000 0 | 1250 0 |
| 10000 | 1000 0 | 1500 0 | 2000 0 | 2500 0 |

## A Table of Accounts.

| | 6 shill. | 7 shill. | 8 shill. | 9 shill. | 10 shil. |
|---|---|---|---|---|---|
| | li. sh. | li. sh. | li. sh. | li. sh. | li. sh. |
| 1 | 0 | 7 | 8 | 9 | 10 |
| 2 | 12 | 14 | 16 | 18 | 1 00 |
| 3 | 18 | 1 1 | 1 4 | 1 7 | 1 10 |
| 4 | 1 4 | 1 8 | 1 12 | 1 16 | 2 00 |
| 5 | 1 10 | 2 15 | 2 0 | 2 5 | 2 10 |
| 6 | 1 16 | 2 2 | 2 8 | 2 14 | 3 00 |
| 7 | 2 2 | 2 9 | 2 16 | 3 3 | 3 10 |
| 8 | 2 8 | 3 16 | 3 4 | 3 12 | 4 00 |
| 9 | 2 14 | 3 3 | 3 12 | 4 1 | 4 10 |
| 10 | 3 0 | 3 10 | 4 0 | 4 10 | 5 0 |
| 20 | 6 0 | 7 0 | 8 0 | 9 00 | 10 0 |
| 30 | 9 0 | 10 10 | 12 0 | 13 10 | 15 0 |
| 40 | 12 0 | 14 0 | 16 0 | 18 00 | 20 0 |
| 50 | 15 0 | 17 10 | 20 0 | 22 10 | 25 0 |
| 60 | 18 0 | 21 0 | 24 0 | 27 00 | 30 0 |
| 70 | 21 0 | 24 10 | 28 0 | 31 10 | 35 0 |
| 80 | 24 0 | 28 0 | 32 0 | 36 00 | 40 0 |
| 90 | 27 0 | 31 10 | 36 0 | 40 10 | 45 0 |
| 100 | 30 0 | 35 0 | 40 0 | 45 0 | 50 0 |
| 200 | 60 0 | 70 0 | 80 0 | 90 0 | 100 0 |
| 300 | 90 0 | 105 0 | 120 0 | 135 0 | 150 0 |
| 400 | 120 0 | 140 0 | 160 0 | 180 0 | 200 0 |
| 500 | 150 0 | 175 0 | 200 0 | 225 0 | 250 0 |
| 600 | 180 0 | 210 0 | 240 0 | 270 0 | 300 0 |
| 700 | 210 0 | 245 0 | 280 0 | 315 0 | 350 0 |
| 800 | 240 0 | 280 0 | 320 0 | 360 0 | 400 0 |
| 900 | 270 0 | 315 0 | 360 0 | 405 0 | 450 0 |
| 1000 | 300 0 | 350 0 | 400 0 | 450 0 | 500 0 |
| 2000 | 600 0 | 700 0 | 800 0 | 900 0 | 1000 0 |
| 5000 | 1000 0 | 1750 0 | 2000 0 | 2250 0 | 2500 0 |
| 10000 | 3000 0 | 3500 0 | 4000 0 | 4500 0 | 5000 0 |

*The use of this Table of Accounts.*

THis Table will serve for many uses, but that which it will be most used about, as being most necessary, is to finde out the true account of any number of Ells, Yards, or Pounds, being sold for so much the Yard, Ell, or Pound.

*For Example,*

What will 5000 Ells of Lockram at 11 pence the Ell come to?

To finde out this, first look to the price of the Ell, at the head of the Table, then look down the side of the Table, for the number of the Ells, so you shall finde in the last column but one in the Table, and in the last line but one thereof, that 5000 of any thing at 11 pence a piece, comes to 229*l.* 3 shill. 4 pence.

Now if you cannot finde your price in one Column, or your number of things in one line, you must make two or three parts thereof, and adde them altogether; as in the Tables of Interest and Rebate before.

Thus, if you would know what 1500 Ells at nine pence half penny comes to.

First, In the Table of nine pence.

| | *li.* | *sh.* | *d.* |
|---|---|---|---|
| 1000 *nine pences are* | 37 | 10 | 00 |
| and 500 *nine pences are* | 18 | 15 | 00 |

Then in the Table of half pence,

| | | | |
|---|---|---|---|
| 1000 *half pence are* | 02 | 01 | 08 |
| *and* 500 *half pence are* | 01 | 00 | 10 |
| *In all* | 59 | 07 | 06 |

You may make this work somewhat shorter, if you divide your numbers, so that they may lie together, and so take them both together out of the Table, by adding them in one sum. As now 700 and 800 make up 1500

| Then | | *li.* | *sh.* | *d.* |
|---|---|---|---|---|
| 700 } 800 } | *nine pences are* | 56 | 5 | 0 |
| | And | | | |
| 700 } 800 } | *half pence* | 3 | 2 | 6 |
| | *In all* | 59 | 7 | 6 |

But the Table is so plain and useful, that you will easily finde out ways of your self, to cast up any such account very certainly and suddenly thereby.

This Table also (if you have any occasion) will serve you as a Table of Interest at five *li. per Cent.* For if instead of the number of pence at the head of the Columnes, you reckon so many Moneths, then the sums underneath, will shew the true Interest due for any number of pounds set down in the side of the Table, just as before in the Table of Interest at six *per Centum*, page 71, 72, 73, 74, 75.

*Neceſſary Table in buying and ſelling any thing by the Hundred.*

| Price of one pound | Price of an hundred weight. | | | Price of one pound | Price of an hundred weight. | | | Price of one pound | Price of an hundred weight. | | | Price of one pound | Price of an hundred weight. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| l. q. | li. | ſh | d. | d. | q. | li. | ſh. | d. | d. | q. | li. | ſh. | d. | l. | ſh. | d. |
| 0 1 | 0 | 2 | 4 | 6 | 1 | 2 | 18 | 4 | 12 | 1 | 5 | 14 | 4 | | | |
| 0 2 | 0 | 4 | 8 | 6 | 2 | 3 | 0 | 8 | 12 | 2 | 5 | 16 | 8 | | | |
| 0 3 | 0 | 7 | 0 | 6 | 3 | 3 | 3 | 0 | | 3 | 5 | 19 | 0 | | | |
| 1 0 | 0 | 9 | 4 | 7 | 0 | 3 | 5 | 4 | 13 | 0 | 6 | 1 | 4 | | | |
| 1 1 | 0 | 11 | 8 | 7 | 1 | 3 | 7 | 8 | 13 | 1 | 6 | 3 | 8 | | | |
| 1 2 | 0 | 14 | 0 | 7 | 2 | 3 | 10 | 0 | 13 | 2 | 6 | 6 | 0 | | | |
| 1 3 | 0 | 16 | 4 | 7 | 3 | 3 | 12 | 4 | 13 | 3 | 6 | 8 | 4 | | | |
| 2 0 | 0 | 18 | 8 | 8 | 0 | 3 | 14 | 8 | 14 | 0 | 6 | 10 | 8 | | | |
| 2 1 | 1 | 1 | 0 | 8 | 1 | 3 | 17 | 0 | 14 | 1 | 6 | 13 | 0 | | | |
| 2 2 | 1 | 3 | 4 | 8 | 2 | 3 | 19 | 4 | 14 | 2 | 6 | 15 | 4 | | | |
| 2 3 | 1 | 5 | 8 | 8 | 3 | 4 | 1 | 8 | 14 | 3 | 6 | 17 | 8 | | | |
| 3 0 | 1 | 8 | 0 | 9 | 0 | 4 | 4 | 0 | 15 | 0 | 7 | 0 | 0 | | | |
| 3 1 | 1 | 10 | 4 | 9 | 1 | 4 | 6 | 4 | 15 | 1 | 7 | 2 | 4 | | | |
| 3 2 | 1 | 12 | 8 | 9 | 2 | 4 | 8 | 8 | 15 | 2 | 7 | 4 | 8 | | | |
| 3 3 | 1 | 15 | 0 | 9 | 3 | 4 | 11 | 0 | 15 | 3 | 7 | 7 | 0 | | | |
| 4 0 | 1 | 17 | 4 | 10 | 0 | 4 | 13 | 4 | 16 | 0 | 7 | 9 | 4 | | | |
| 4 1 | 1 | 19 | 8 | 10 | 1 | 4 | 15 | 8 | 16 | 1 | 7 | 11 | 8 | | | |
| 4 2 | 2 | 2 | 0 | 10 | 2 | 4 | 18 | 0 | 16 | 2 | 7 | 14 | 0 | | | |
| 4 3 | 2 | 4 | 4 | 10 | 3 | 5 | 0 | 4 | 16 | 3 | 7 | 16 | 4 | | | |
| 5 0 | 2 | 6 | 8 | 11 | 0 | 5 | 2 | 8 | 17 | 0 | 7 | 18 | 8 | | | |
| 5 1 | 2 | 9 | 0 | 11 | 1 | 5 | 5 | 0 | 17 | 1 | 8 | 1 | 0 | | | |
| 5 2 | 2 | 11 | 4 | 11 | 2 | 5 | 7 | 4 | 17 | 2 | 8 | 3 | 4 | | | |
| 5 3 | 2 | 13 | 8 | 11 | 3 | 5 | 9 | 8 | 17 | 3 | 8 | 5 | 8 | | | |
| 6 0 | 2 | 16 | 0 | 12 | 0 | 5 | 12 | 0 | 18 | 0 | 8 | 8 | 0 | | | |

*The use of this Table.*

BY this Table, knowing the price of one pound of any thing, you may know how much the hundred weight (being 112 pound) comes to. Or, having bought any thing by the hundred weight, you may know how to retail it again by the pound. Thus if one pound of any thing cost four pence three farthings, a hundred weight of the same commodity will cost 2 pound, 4 shillings, and 4 pence. Also, if a hundred weight of any thing cost 4 pound, 6 shillings 4 pence, the price of one pound thereof will cost 9 pence farthing: the like may be done for any other. But if your commodity come to above 18 pence the pound, you may do it by the half of the price; or else reckon first for the shillings, and after for the rest of the price.

A Table of Expences or Wages, whereby knowing what is for one day, you may see what it is in a Week, Month, or Year.

| By the day | By the week | | | By the month | | | By the year | | |
|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. | li. | sh. | d. | li. | sh. | d. |
| 1 | 0 | 0 | 7 | 0 | 2 | 4 | 1 | 10 | 5 |
| 2 | 0 | 1 | 2 | 0 | 4 | 8 | 3 | 0 | 10 |
| 3 | 0 | 1 | 9 | 0 | 7 | 0 | 4 | 11 | 3 |
| 4 | 0 | 2 | 4 | 0 | 9 | 4 | 6 | 1 | 8 |
| 5 | 0 | 2 | 11 | 0 | 11 | 8 | 7 | 12 | 1 |
| 6 | 0 | 3 | 6 | 0 | 14 | 0 | 9 | 2 | 6 |
| 7 | 0 | 4 | 1 | 0 | 16 | 4 | 10 | 12 | 11 |
| 8 | 0 | 4 | 8 | 0 | 18 | 8 | 12 | 3 | 4 |
| 9 | 0 | 5 | 3 | 1 | 1 | 0 | 13 | 13 | 9 |
| 10 | 0 | 5 | 10 | 1 | 3 | 4 | 15 | 4 | 2 |
| 11 | 0 | 6 | 5 | 1 | 5 | 8 | 16 | 14 | 9 |
| 1 | 0 | 7 | 0 | 1 | 8 | 0 | 18 | 5 | 0 |
| 2 | 0 | 14 | 0 | 2 | 16 | 0 | 36 | 10 | 0 |
| 3 | 1 | 1 | 0 | 4 | 4 | 0 | 54 | 15 | 0 |
| 4 | 1 | 8 | 0 | 5 | 12 | 0 | 73 | 0 | 0 |
| 5 | 1 | 15 | 0 | 7 | 0 | 0 | 91 | 5 | 0 |
| 6 | 2 | 2 | 0 | 8 | 8 | 0 | 109 | 10 | 0 |
| 7 | 2 | 9 | 0 | 9 | 16 | 0 | 127 | 15 | 0 |
| 8 | 2 | 16 | 0 | 11 | 4 | 0 | 146 | 0 | 0 |
| 9 | 3 | 3 | 0 | 12 | 12 | 0 | 164 | 5 | 0 |
| 10 | 3 | 10 | 0 | 14 | 0 | 0 | 182 | 10 | 0 |
| 11 | 3 | 17 | 0 | 15 | 8 | 0 | 219 | 15 | 0 |
| 12 | 4 | 4 | 0 | 16 | 16 | 0 | 219 | 0 | 0 |
| 13 | 4 | 11 | 0 | 18 | 4 | 0 | 237 | 5 | 0 |
| 14 | 4 | 18 | 0 | 19 | 12 | 0 | 255 | 10 | 0 |
| 15 | 5 | 5 | 0 | 21 | 0 | 0 | 273 | 15 | 0 |
| 16 | 5 | 12 | 0 | 22 | 8 | 0 | 292 | 0 | 0 |
| 17 | 5 | 19 | 0 | 23 | 16 | 0 | 310 | 5 | 0 |
| 18 | 6 | 6 | 0 | 25 | 4 | 0 | 328 | 10 | 0 |
| 19 | 6 | 13 | 0 | 26 | 12 | 0 | 346 | 15 | 0 |
| 20 | 7 | 0 | 0 | 28 | 0 | 0 | 365 | 0 | 0 |

Pence

Shillings

In a year there are 365 dayes, and in one pound or twenty ſhillings there is 240 pence. So that one peny a day comes in the year to one pound, one half pound, one groat, and one peny; and thus you may reckon for any other number of pence.

*As for example, ſix pence a day.*

| | | | |
|---|---|---|---|
| Is 6 pound | 06 | 00 | 00 |
| 6 half pounds, which are | 03 | 00 | 00 |
| 6 Groats, which are | 00 | 02 | 00 |
| 6 Pence, which are | 00 | 00 | 06 |
| *In all* | 09 | 02 | 06 |

Upon this Table you may make theſe and ſuch like conſiderations.

A peny a day in one year comes to one *li.* 10. *ſhill.* and 5. *d.* Therefore in 21 years, it will come to 31*l.* 18 *ſhill.* 9. *d.* This will come only by the ſaving thereof. But if you alſo employ this, ſo that it may gain after the rate of ten in the hundred, it will amount to above fourſcore and ſix pounds in the ſaid time, which may be a good portion for a mans child.

A Table of the Kings of *England*.

| *Kings.* | They began to Reign. | They reign'd yea. | mo. | da |
|---|---|---|---|---|
| 1 Wil Conq. | 1066 Octo. 14 | 20 | 11 | 22 |
| 2 Will. Rufus | 1087 Sept. 9 | 12 | 11 | 18 |
| 3 Henry 1 | 1100 August 1 | 35 | 4 | 11 |
| 4 Stephen | 1135 Decem. 2 | 18 | 11 | 18 |
| 5 Henry 2 | 1154 Oct. 25 | 34 | 9 | 2 |
| 6 Richard 1 | 1189 July 6 | 9 | 9 | 22 |
| 7 John | 1199 April 6 | 17 | 7 | 0 |
| 8 Henry 3 | 1216 Oct. 19 | 56 | 1 | 0 |
| 9 Edward 1 | 1272 Nov. 16 | 34 | 8 | 9 |
| 10 Edward 2 | 1307 July 7 | 19 | 7 | 6 |
| 11 Edward 3 | 1326 Jan. 25 | 50 | 5 | 7 |
| 12 Richard 2 | 1377 June 21 | 22 | 3 | 14 |
| 13 Henry 4 | 1399 Sept. 29 | 13 | 6 | 3 |
| 14 Henry 5 | 1412 Marc. 20 | 9 | 5 | 24 |
| 15 Henry 6 | 1422 Aug. 31 | 38 | 6 | 16 |
| 16 Edward 4 | 1460 March 4 | 22 | 1 | 8 |
| 17 Edward 5 | 1483 April 9 | 0 | 2 | 18 |
| 18 Richard 3 | 1483 June 22 | 2 | 2 | 5 |
| 19 Henry 7 | 1485 Aug. 22 | 23 | 8 | 19 |
| 20 Henry 8 | 1509 April 22 | 37 | 10 | 2 |
| 21 Edward 6 | 1546 Jan. 28 | 6 | 5 | 19 |
| 22 Mary | 1553 July 6 | 5 | 4 | 22 |
| 23 Elizabeth | 1558 Nov. 17 | 44 | 4 | 15 |
| 24 James | 1602 Marc. 24 | 22 | 0 | 8 |
| 25 Charles I | 1625 Mar. 27 | 23 | 11 | 2 |
| 26 Charles II | 1648 Jan. 30 | *Vivat Rex.* | | |

## *The use of the Table of Kings.*

THis Table of the Kings I suppose may be necessary in searching out the antiquity of many old Evidences, which are dated many times by the years of the King then reigning, and not by the years of our Lord. And it might be more plain and profitable if it were drawn out a little larger, but time and paper are wanting; I have only therefore as a pattern shewn how it might be done in this hundred years last past, and added some brief notes out of History thereunto, and added one Column shewing the years which are past, to this present year, 1667.

The use of this Table will appear in such questions.

*How long is it since the 25th. year of* King Henry *the Third*?

Which is thus found,

| | |
|---|---|
| *Henry* 3 began to reign, *Anno. Dom.* | 1216. |
| To which adde the 25 years, | 25 |
| So is it, *Anno Dom.* | 1241 |
| Which substracted from the present year | 1667 |
| There remains the year since | 426 |

*A brief Concordance of years with some memorable things since the beginning of the Reign of Queen* Elizabeth.

| Anno Dom. | A. Reg. | Since. | *Queen* Elizabeth *began* Novemb. 1558. |
|---|---|---|---|
| 1558 | 1 | 109 | A Parliament called |
| 1559 | 2 | 108 | Monasteries suppressed |
| 1560 | 3 | 107 | War with *Scots* and *French* |
| 1561 | 4 | 106 | *Pauls* Steeple burnt |
| 1562 | 5 | 105 | Tempest and Earthquake |
| 1563 | 6 | 104 | 20000 dye of the Plague in |
| 1564 | 7 | 103 | *Thames* frozen (*London* |
| 1565 | 8 | 102 | Peace with *France* |
| 1566 | 9 | 101 | King *James* born |
| 1567 | 10 | 100 | Royal Exchange finished |
| 1568 | 11 | 99 | A Dry Summer |
| 1569 | 12 | 98 | Rebellion in the North |
| 1570 | 13 | 97 | Wars with *Scotland* |
| 1571 | 14 | 96 | Earthquake in *Herefordshire* |
| 1572 | 15 | 95 | Massacre in *France* |
| 1573 | 16 | 94 | Earl of *Essex* goes to *Ireland* |
| 1574 | 17 | 93 | Counterfeit Spirits punished |
| 1575 | 18 | 92 | An Earthquake |
| 1576 | 19 | 91 | *Forbishers* North Voyage |
| 1577 | 20 | 90 | Infection at *Oxford* Assizes |
| 1588 | 21 | 89 | A great Snow |

| Anno Dom. | Æt. | Since | Queen *Elizabeth.* |
|---|---|---|---|
| 1579 | 22 | 18 | A curious Lock-Smith |
| 1580 | 23 | 87 | Great Earthq. & Blazing Star |
| 1581 | 24 | 86 | Three Jesuites Executed |
| 1582 | 2 | 5 | New Kalendar began |
| 1583 | 26 | 4 | Earthquake in *Dorsetshire* |
| 1584 | 27 | 83 | *Nantwich* burnt |
| 1585 | 28 | 82 | Tobacco first used in *England* |
| 1586 | 29 | 81 | *Ludgate* new built |
| 1587 | 30 | 80 | *Blackwel* Hall new built |
| 1588 | 31 | 79 | *Spains* Armado overthrown |
| 1589 | 32 | 78 | Duke of *Guise* murthered |
| 1590 | 33 | 77 | Blasphemous *Hacket* hanged |
| 1591 | 34 | 76 | *East India* Company began |
| 1592 | 35 | 75 | The *Thames* almost dry |
| 1593 | 36 | 74 | 10635 die of the Pl. in *Lond.* |
| 1594 | 37 | 73 | Great Tempest |
| 1595 | 38 | 72 | Scarcity of Corn |
| 1596 | 39 | 71 | E. *Essex* takes *Cadiz* in *Spain* |
| 1597 | 40 | 70 | Wheat 13 shillings a Bushel |
| 1598 | 41 | 69 | Great Tempests and Frosts |
| 1599 | 42 | 68 | Earl of *Essex* goes to *Ireland* |
| 1600 | 43 | 67 | Embass. from *Russia* & *Barbary* |
| 1601 | 44 | 66 | Earl of *Essex* beheaded |
| 1602 | 45 | 65 | Qu. *Eliz.* dies at *Richmond* |

King

King *James* began to Reign the 24 of *March*, 1602. but one day before 1603.

| Anno Dom. | A. Re. | Since | King *James*. |
|---|---|---|---|
| 1603 | 1 | 64 | 30578 die of the Pl. in *London* |
| 1604 | 2 | 63 | Peace with *Spain* |
| 1605 | 3 | 62 | Powder Treason |
| 1606 | 4 | 61 | K. of *Denmark* came to *England* |
| 1607 | 5 | 60 | *Moor-fields* beautified |
| 1608 | 6 | 59 | Oath of Allegiance |
| 1609 | 7 | 58 | New Exchange in the *Strand* |
| 1610 | 8 | 57 | King of *France* murthered |
| 1611 | 9 | 56 | *Barthol. Legat* an *Arrian* burnt |
| 1612 | 10 | 55 | P. *Henry* dies, L. *Eliz.* married |
| 1613 | 11 | 54 | Artillery Company revived |
| 1614 | 12 | 53 | *Middletons* Water |
| 1615 | 13 | 52 | Smithfield paved |
| 1616 | 14 | 51 | *Charles* created Prince of *Wales* |
| 1617 | 15 | 50 | *Haidock* the sleeping Preacher |
| 1618 | 16 | 49 | Sir *Walter Rawleigh* decollated |
| 1619 | 17 | 48 | Queen *Anne* dies |
| 1620 | 18 | 47 | King of *Bohemia* overthrown |
| 1621 | 19 | 46 | *Ph.* 3 K. of *Spain* dies, *Ph.* 4 suc. |
| 1622 | 20 | 45 | Prince *Charles* goes into *Spain* |
| 1623 | 21 | 44 | *Black-Friers* downfal |
| 1624 | 22 | 43 | *Amboyna's* bloody Cruelty. |

King

King *Charles* began to Reign the 27 of *March*, 1625.

| *Anno Dom.* | *Aet.* | *Since.* | King *Charles* I. |
|---|---|---|---|
| 1625 | 1 | 42 | 54265 dyc, of the Pl.3541 |
| 1626 | 2 | 41 | War with *Spain* and *France* |
| 1627 | 3 | 40 | Isle of *Rhees* Voyage |
| 1628 | 4 | 39 | Duke of *Buckingham* stabb'd |
| 1629 | 5 | 38 | *New England* planted |
| 1630 | 6 | 37 | K. *Charles* II. born, *May* 29 |
| 1631 | 7 | 36 | Battle at *Lypsick*. *Tilly* slain |
| 1632 | 8 | 35 | *London* Bridge burnt |
| 1633 | 9 | 34 | *James* D. of *York* born, *Oct.*14 |
| 1634 | 10 | 33 | Ship-money first taxed |
| 1635 | 11 | 32 | Old *Parr* dyed, aged 160. |
| 1636 | 12 | 31 | *Dutch* take *Spanish* silver Fleet |
| 1637 | 13 | 30 | *English* Lyturc. sent into *Scot.* |
| 1638 | 14 | 29 | The *Scots* National Covenant |
| 1639 | 15 | 28 | *Dutch* beat the *Span* at *Dover* |
| 1640 | 16 | 27 | The long Parl. begins, *Nov.*3 |
| 1641 | 17 | 26 | Earl of *Strafford* beheaded |
| 1642 | 18 | 25 | *Edge hill* Fight |
| 1643 | 19 | 24 | *Newberry* first Fight |
| 1644 | 20 | 23 | *Newberry* second Fight |
| 1645 | 21 | 22 | Arch-B. *Canterbury* beheaded |
| 1646 | 22 | 21 | Lord *Fairfax* takes *Oxford* |
| 1647 | 23 | 20 | King taken by *Parl.* and Army |
| 1638 | 24 | 19 | King traiterously beheaded |

King

K. *Charles* II began to Reign the 30 of *January*, 1648.

| | A. Re. | Since | King *Charles* II. |
|---|---|---|---|
| 49 | 1 | 18 | Powder blow in *Tower ſtreet* |
| 50 | 2 | 17 | K. *Ch.* II. crowned in *Scotland* |
| 51 | 3 | 16 | *Worceſter* fight. *Love* beheaded |
| 52 | 4 | 15 | Wars with *Holland* |
| 53 | 5 | 14 | Old and New Parl. diſſolved |
| 54 | 6 | 13 | Peace with *Holland* |
| 55 | 7 | 12 | Wars with *Spain* |
| 56 | 8 | 11 | 2 Tides in 3 hours, *Octob.* 3 |
| 57 | 9 | 10 | *Mardike* taken by the *E.* & *Fr.* |
| 58 | 10 | 9 | *Cromwel* dyed (the K. |
| 59 | 11 | 8 | Sir *G. Booth*, and Gen. *Monk* for |
| 60 | 12 | 7 | K. *Charles* II joyfully reſtored |
| 61 | 13 | 6 | K. *Ch.* II Crowned, *April* 23. |
| 62 | 14 | 5 | Married to Queen *Katharine* |
| 63 | 15 | 4 | King and Queen at *Windſor* |
| 64 | 16 | 3 | 3 Blazing-Stars ſeen |
| 65 | 17 | 2 | 97351 dye, of the Pl. 68586 |
| 66 | 18 | 1 | 13200 houſes burnt in *London* |
| 67 | 19 | 0 | The Dutch Hoſtile Treaty |

# A Constant

# KALENDER

OR,

*An Almanack for 300 Years,*

t more exactly serving for the next XIX Years, being the Circle of the Moon, or the Golden Number, beginning in the Year of our LORD, 1656.

---

By *H. P.*

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*LONDON,*

inted by E. *Cotes*, for *Thomas Pierrepont*, 1667.

# A Constant
# CALENDER
## OR,
## An Almanack for 300 Years,

more exactly serving for the next XIX Years, being the Circle of the Moon, or the Golden Number, beginning in the Year of our LORD, 1656.

By *H. P.*

*LONDON*,

inted by E. *Cotes*, for *Thomas Pierrepont*, 1667.

*An Almanack for* XIX *Years, according the Englisb and Forreign Accounts.*

| Anno Dom. | Prim. | Epact. | Sund. Lett. | Shrove Sund. | Easter Sund. | Whit-Sunday |
|---|---|---|---|---|---|---|
| 1656 | 4 | 14 | F E | Feb. 17 | April 6 | May 25 |
| 1657 | 5 | 25 | D | 8 | Mar. 29 | 17 |
| 1658 | 6 | 6 | C | 21 | Apr. 11 | 30 |
| 1659 | 7 | 17 | B | 13 | 3 | 22 |
| 1660 | 8 | 28 | A G | Mar. 4. | 22 | June 10 |
| 1661 | 9 | 9 | F | Feb. 24 | 14 | 2 |
| 1662 | 10 | 20 | E | 9 | Mar 30 | May 18 |
| 1663 | 11 | 1 | D | Mar. 1. | Apr. 19 | June 7 |
| 1664 | 12 | 12 | C B | Feb. 21 | 10 | May 29 |
| 1665 | 13 | 23 | A | 5 | Mar 26 | 14 |
| 1666 | 14 | 4 | G | 25 | Apr. 15 | June 23 |
| 1667 | 15 | 15 | F | 17 | 7 | May 26 |
| 1668 | 16 | 26 | E D | 2 | Mar. 22 | 10 |
| 1669 | 17 | 7 | C | 21 | Apr. 11 | 30 |
| 1670 | 18 | 18 | B | 13 | 3 | 22 |
| 1671 | 19 | 29 | A | Mar. 5. | 25 | June 11 |
| 1672 | 1 | 11 | G F | Feb. 18 | 7 | May 26 |
| 1673 | 2 | 22 | E | 9 | Mar. 30 | 18 |
| 1674 | 3 | 3 | D | Mar. 1. | Apr. 19 | June 7 |

*This Table shews, first the date of the ye Secondly the Prime or Golden Number. Thi ly the Epact. Fourthly, the Dominical Le for these years. And then in their order chief Moveable Feasts, viz. Shrove Sun Easter day, and Whitsunday, upon which*

reſt depend. The Foreign account is com-
ly ten days, before us, but their Move-
e Feaſts fall ſometimes at the ſame time
ith ours, ſometimes 1, 2, 3, 4, or 5 weeks be-
ours; as you may ſee in the laſt Column
the Table.

## Of the Terms.

There are 4 times of the year appointed
for the determining of all cauſes, theſe
called Terms. Two of theſe Terms. *viz.*
illary Term, and Michaelmaſs Term, are
a conſtant time of the year. But Eaſter
rm, and Trinity Term, are ſooner or la-
, as thoſe Feaſts happen. Each of theſe
rms hath ſeveral Returns, and each Re-
n hath four days belonging to it. The firſt
he day of *Return*, or *Eſſoyn*, for the De-
ndant, in a perſonal action, or the Tenant
a real action. The ſecond is the day of
*ception*, for the Plantiffe, or Defendant,
lay an Exception. The third is the day
ereon the Sheriff muſt return the Writ.
e fourth is the day of *Appearance* in the
ourt. Theſe four dayes follow each other
order, except a Sunday, or Holy day
e up any of them, and then the day fol-
ing ſerves for both occaſions.

The beginning and end of Hillary Term
d Michaelmaſs Term with all their Re-
ns, you ſhall finde in the following Ka-
der, which are conſtant if no Sunday
der them.

Eaſter

Easter Term begins the Wednesday fortnight, or 17 dayes after Easter, and ends the Monday after Holy Thursday, or the Monday before Whitsunday. It hath these five Returns.

| | | |
|---|---|---|
| *Quind. Pasch.* | A fortnight | after Easter |
| *Tres Paschæ* | Three weeks | after Easter |
| *Mense Paschæ* | A Month | after Easter |
| *Quinq; Paschæ* | Five weeks | after Easter |
| *Cras. Ascen.* | The day after Holy-Thurs | |

Trinity Term begins the Friday after Trinity Sunday which is the next to Whitsunday, and hath these four Returns.

| | |
|---|---|
| *Cras. Trin* | The Monday after Trin. S. |
| *Oct. Trin.* | A week after Trinity Sun. |
| *Quind. Trin.* | A fortnight after Trin. S. |
| *Tres Trin.* | Three weeks after Trin S. |

The Exchequer opens 4 dayes before Trinity Term, but 8 dayes before the other Terms.

*To reduce minutes into hours and quarters.*

60 min. are an hour
52 min. or 53 min. three quarters and half.
45 min. are three quarters
37 or 38 min. half and half quarter
30 min. are half an hour
22 or 23 min. quarter and half quarter
15 min. are a quarter of an hour
7 or 8 min. half a quarter

Jan-

| | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | d | 28 | 1 | David | | |
| 2 | e | 26 | 14 | 5 | 44 | 7 |
| 3 | f | ✱ | | 5 | 46 | 7 |
| 4 | g | 25 | 10 | 5 | 48 | 7 |
| 5 | a | 24 | | 5 | 50 | 7 |
| 6 | b | 23 | 0 | 5 | 52 | 7 |
| 7 | c | 22 | 11 | 5 | 54 | 7 |
| 8 | d | 21 | | 5 | 56 | 7 |
| 9 | e | 20 | 7 | 5 | 58 | 7 |
| 10 | f | 18 | 20 | ☉ in ♈ | | |
| 11 | g | ✱ | | 6 | 2 | 6 |
| 12 | a | 17 | 16 | 6 | 4 | 6 |
| 13 | b | 16 | | 6 | 6 | 6 |
| 14 | c | 15 | 5 | 6 | 8 | 6 |
| 15 | d | 14 | 1 | 6 | 10 | 6 |
| 16 | e | 12 | 14 | 6 | 12 | 6 |
| 17 | f | ✱ | | 6 | 14 | 6 |
| 18 | g | 11 | 2 | 6 | 16 | 6 |
| 19 | a | 10 | | 6 | 18 | 6 |
| 20 | b | 9 | 0 | ☉ 10 ♈ | | |
| 21 | c | 7 | 11 | 6 | 22 | 6 |
| 22 | d | ✱ | | 6 | 24 | 6 |
| 23 | e | 6 | 7 | 6 | 26 | 6 |
| 24 | f | 4 | 20 | 6 | 28 | 6 |
| 25 | g | ✱ | | Ann. My. | | |
| 26 | a | 3 | 8 | 6 | 32 | 6 |
| 27 | b | 2 | | 6 | 34 | 6 |
| 28 | c | 1 | 7 | 6 | 36 | 6 |
| 29 | d | 29 | 17 | 6 | 38 | 6 |
| 30 | e | 28 | 14 | ☉ 20 ♈ | | |
| 31 | f | 27 | | 6 | 42 | 6 |



| M | W | Sp | H | S | ☉ | R. |
|---|---|---|---|---|---|---|
| 1 | g | 26 | 2 | 6 | 44 | 6 |
| 2 | a | 25 | 22 | 6 | 46 | 6 |
| 3 | b | 24 | 0 | 6 | 48 | 6 |
| 4 | c | 23 | 11 | 6 | 50 | 6 |
| 5 | d | ✱ | | 6 | 52 | 6 |
| 6 | e | 22 | 0 | 6 | 54 | 6 |
| 7 | f | 20 | 20 | 6 | 56 | 6 |
| 8 | g | 19 | | 6 | 57 | 6 |
| 9 | a | 18 | 9 | 6 | 59 | 6 |
| 10 | b | ✱ | | ☉ in ♉ | | |
| 11 | c | 17 | 5 | 7 | 2 | 5 |
| 12 | d | 15 | 6 | 7 | 4 | 5 |
| 13 | e | 14 | 14 | 7 | 6 | 5 |
| 14 | f | 13 | | 7 | 8 | 5 |
| 15 | g | 12 | 2 | 7 | 10 | 5 |
| 16 | a | 11 | 15 | 7 | 11 | 5 |
| 17 | b | 10 | | 7 | 13 | 5 |
| 18 | c | 9 | 11 | 7 | 15 | 5 |
| 19 | d | 8 | | 7 | 17 | 5 |
| 20 | e | 7 | 0 | ☉ 10 ♉ | | |
| 21 | f | 6 | 20 | 7 | 19 | 5 |
| 22 | g | 5 | | 7 | 22 | 5 |
| 23 | a | 4 | 9 | George | | |
| 24 | b | 3 | 21 | 7 | 25 | 5 |
| 25 | c | 2 | | Mark | | |
| 26 | d | 1 | 18 | 7 | 29 | 5 |
| 27 | e | ✱ | | 7 | 31 | 5 |
| 28 | f | 29 | 6 | 7 | 32 | 5 |
| 29 | g | 28 | 2 | 7 | 34 | 5 |
| 30 | a | 27 | | ☉ 20 ♉ | | |

| May 31 | | | | | | | June 30 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | b | * | | Ph | Ja. | | 1 | e | Ep | H | S | ☉ | R |
| 2 | c | 25 | 11 | 7 | 39 | 5 | 1 | e | 25 | 0 | ☉ | 20 | ♊ |
| 3 | d | 24 | | 4 | 40 | 5 | 2 | f | 23 | 13 | 8 | 11 | 4 |
| 4 | e | 23 | 0 | 7 | 42 | 5 | 3 | g | * | | 8 | 11 | 4 |
| 5 | f | 22 | 13 | 7 | 44 | 5 | 4 | a | 22 | 1 | 8 | 12 | 4 |
| 6 | g | 21 | | 7 | 45 | 5 | 5 | b | 20 | 21 | 8 | 12 | 4 |
| 7 | a | 20 | 9 | 7 | 46 | 5 | 6 | c | 19 | | 8 | 12 | 4 |
| 8 | b | 18 | 21 | 7 | 47 | 5 | 7 | d | 18 | 10 | 8 | 13 | 4 |
| 9 | c | * | | 7 | 49 | 5 | 8 | e | * | | 8 | 13 | 4 |
| 10 | d | 17 | 18 | 7 | 50 | 5 | 9 | f | 17 | 6 | dayes at | | |
| 11 | e | 16 | | ☉ in ♊ | | | 10 | g | 15 | 19 | a stand | | |
| 12 | f | 15 | 6 | 7 | 53 | 5 | 11 | a | 14 | 15 | ☉ in ♋ | | |
| 13 | g | 14 | 2 | 7 | 54 | 5 | 12 | b | 13 | | dayes | | |
| 14 | a | 12 | 15 | 7 | 55 | 5 | 13 | c | 12 | 4 | shorten | | |
| 15 | b | * | | 7 | 56 | 5 | 14 | d | 11 | 16 | 8 | 13 | 4 |
| 16 | c | 11 | 4 | 7 | 57 | 5 | 15 | e | 10 | | 8 | 13 | 4 |
| 17 | d | 10 | | 7 | 58 | 5 | 16 | f | 9 | 13 | 8 | 12 | 4 |
| 18 | e | 9 | 0 | 7 | 59 | 5 | 17 | g | 8 | | 8 | 12 | 4 |
| 19 | f | 7 | 13 | 8 | 0 | 4 | 18 | a | 7 | 1 | 8 | 12 | 4 |
| 20 | g | * | | 8 | 1 | 4 | 19 | b | 6 | 21 | 8 | 11 | 4 |
| 21 | a | 6 | 9 | ☉ | 10 | ♊ | 20 | c | 5 | | 8 | 11 | 4 |
| 22 | b | 4 | 1 | 8 | 3 | 4 | 21 | d | 4 | 10 | 8 | 11 | 4 |
| 23 | c | * | | 8 | 4 | 4 | 22 | e | * | | ☉ | 10 | ♋ |
| 24 | d | 3 | 10 | 8 | 5 | 4 | 23 | f | 3 | 0 | 8 | 10 | 4 |
| 25 | e | 2 | | 8 | 6 | 4 | 24 | g | 1 | 19 | Joh. | | B |
| 26 | f | 1 | 6 | 8 | 7 | 4 | 25 | a | * | | 8 | 8 | 4 |
| 27 | g | 9 | 19 | 8 | 8 | 4 | 26 | b | 29 | 6 | 8 | 8 | 5 |
| 28 | a | 28 | 15 | 8 | 8 | 4 | 27 | c | 28 | 4 | 8 | 7 | 4 |
| 29 | b | 27 | | 8 | 9 | 4 | 28 | d | 26 | 17 | 8 | 6 | 4 |
| 30 | c | 26 | 4 | 8 | 10 | 4 | 29 | e | * | | Pet | | A. |
| 31 | d | * | | 8 | 10 | 4 | 30 | f | 25 | 13 | 8 | 4 | 4 |

| July 31 | | | | | | August 31 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | g | 24 | | 8 | 3 4 | 1 | c | ✱ | | Lamas. | |
| 2 | a | 23 | 1 | ☉ | 20♋ | 2 | d | 22 | 3 | 7 | 19 5 |
| 3 | b | 22 | 14 | 8 | 2 4 | 3 | e | 21 | 0 | ☉ | 20♌ |
| 4 | c | 21 | | 8 | 1 4 | 4 | f | 20 | 0 | 7 | 16 5 |
| 5 | d | 20 | 10 | 8 | 0 4 | 5 | g | 18 | 12 | 7 | 14 5 |
| 6 | e | 19 | | 7 | 58 5 | 6 | a | ✱ | | 7 | 12 5 |
| 7 | f | 18 | 0 | 7 | 57 5 | 7 | b | 17 | 8 | 7 | 10 5 |
| 8 | g | 17 | 19 | 7 | 56 5 | 8 | c | 15 | 20 | 7 | 8 5 |
| 9 | a | 16 | | 7 | 55 5 | 9 | d | 14 | 17 | 7 | 7 5 |
| 10 | b | 15 | 8 | 7 | 54 5 | 10 | e | 13 | | Lauren | |
| 11 | c | 14 | 4 | 7 | 53 5 | 11 | f | 12 | 5 | 7 | 3 5 |
| 12 | d | 12 | 17 | 7 | 52 5 | 12 | g | 11 | 18 | 7 | 1 5 |
| 13 | e | ✱ | | ☉ | in ♌ | 13 | a | 10 | | ☉ | in ♍ |
| 14 | f | 11 | 5 | 7 | 49 5 | 14 | b | 9 | 14 | 6 | 58 6 |
| 15 | g | 10 | | Swith. | | 15 | c | 8 | | 6 | 56 6 |
| 16 | a | 9 | 1 | 7 | 46 5 | 16 | d | 7 | 3 | 6 | 54 6 |
| 17 | b | 7 | 14 | 7 | 45 5 | 17 | e | ✱ | | 6 | 52 6 |
| 18 | c | ✱ | | 7 | 43 5 | 18 | f | 6 | 0 | 6 | 50 6 |
| 19 | d | 6 | 10 | Do. d. b. | | 19 | g | 4 | 12 | 6 | 48 6 |
| 20 | e | 5 | | 7 | 40 5 | 20 | a | ✱ | | 6 | 46 6 |
| 21 | f | 4 | 0 | 7 | 39 5 | 21 | b | 3 | 0 | 6 | 44 6 |
| 22 | g | 3 | 11 | Magda. | | 22 | c | 1 | 20 | 6 | 42 6 |
| 23 | a | 2 | | ☉ | 10♌ | 23 | d | ✱ | | ☉ | 10♍ |
| 24 | b | 1 | 8 | 7 | 34 5 | 24 | e | 29 | 9 | Barth. | |
| 25 | c | 29 | 20 | Ja. Ap. | | 25 | f | 28 | 5 | 6 | 36 6 |
| 26 | d | 28 | 14 | 7 | 0 5 | 26 | g | 26 | 18 | 6 | 34 6 |
| 27 | e | 27 | | 7 | 29 5 | 27 | a | ✱ | | 6 | 32 6 |
| 28 | f | 26 | 5 | 7 | 27 5 | 28 | b | 25 | 14 | Do. d. c. | |
| 29 | g | ✱ | | 7 | 25 5 | 29 | c | 24 | | 6 | 29 6 |
| 30 | a | 25 | 1 | 7 | 24 5 | 30 | d | 23 | 3 | 6 | 27 6 |
| 31 | b | 23 | 14 | 7 | 22 5 | 31 | e | 22 | 15 | 6 | 25 6 |

| September 30 | | | | | | | October 31 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M | W | Ep | H. | S | ☉ | R | 1 | a | 21 | | 5 | 24 | 7 |
| 1 | f | 21 | | Giles | | | 2 | b | 20 | 0 | 5 | 22 | 7 |
| 2 | g | 20 | 12 | 6 | 21 | 6 | 3 | c | 8 | 13 | ☉ | 20 | ♎ |
| 3 | a | 19 | | ☉ | 20 | ♍ | 4 | d | ✶ | | 5 | 18 | 7 |
| 4 | b | 18 | 0 | 6 | 17 | 6 | 5 | e | 17 | 9 | 5 | 16 | 7 |
| 5 | c | 17 | 20 | 6 | 15 | 6 | 6 | f | 15 | 22 | 5 | 14 | 7 |
| 6 | d | 16 | | 6 | 13 | 6 | 7 | g | 14 | 18 | 5 | 12 | 7 |
| 7 | e | 15 | 9 | 6 | 12 | 6 | 8 | | 13 | | 5 | 10 | 7 |
| 8 | f | 14 | 6 | La. | fair | | 9 | b | 12 | 7 | 5 | 8 | 7 |
| 9 | g | 12 | 18 | 6 | 7 | 6 | 10 | c | 11 | 19 | 5 | 6 | 7 |
| 10 | a | ✶ | | 6 | 5 | 6 | 11 | | 10 | | 5 | 4 | 7 |
| 11 | b | 11 | 7 | 6 | 3 | 6 | 12 | | 9 | 16 | 5 | 2 | 7 |
| 12 | c | 10 | | 6 | 1 | 6 | 13 | f | 8 | | ☉ | in | ♍ |
| 13 | d | 9 | 3 | ☉ | in | ♎ | 14 | g | 7 | 4 | 4 | 59 | 8 |
| 14 | e | 7 | 16 | 5 | 57 | 7 | 15 | a | ✶ | | 4 | 57 | 8 |
| 15 | f | ✶ | | 5 | 55 | 7 | 16 | b | 6 | 0 | 4 | 55 | 8 |
| 16 | g | 6 | 12 | 5 | 53 | 7 | 17 | c | 4 | 13 | 4 | 53 | 8 |
| 17 | a | 5 | | 5 | 51 | 7 | 18 | d | ✶ | | Luke | | |
| 18 | b | 4 | 0 | 5 | 49 | 7 | 19 | e | 3 | 1 | 4 | 49 | 8 |
| 19 | c | 3 | 13 | 5 | 47 | 7 | 20 | f | 2 | | Tres | M. | |
| 20 | d | 2 | | 5 | 45 | 7 | 21 | g | 1 | c | Except. | | |
| 21 | e | 1 | 9 | Matth | | | 22 | a | 29 | 11 | Ket | bre. | |
| 22 | f | 29 | 22 | 5 | 42 | 7 | 23 | b | 28 | 7 | ☾ | beg. | |
| 23 | g | 28 | 18 | ☉ | 10 | ♎ | 24 | c | 26 | 19 | 4 | 40 | 8 |
| 24 | a | 27 | | 5 | 38 | 7 | 25 | d | ✶ | | Crispin | | |
| 25 | b | 26 | 17 | 5 | 36 | 7 | 26 | e | 25 | 16 | ☉ | 13 | ♍ |
| 26 | c | ✶ | | 5 | 34 | 7 | 27 | f | 24 | | Me. | Mi. | |
| 27 | d | 25 | 3 | 5 | 32 | 7 | 28 | g | 23 | 4 | Si | Ju. | |
| 28 | e | 23 | 16 | 5 | 30 | 7 | 29 | a | 22 | 17 | Re. | bre. | |
| 29 | f | ✶ | | Mich. | | | 30 | b | 21 | | Appear | | |
| 30 | g | 22 | 45 | 5 | 26 | 7 | 31 | c | 20 | 13 | 4 | 28 | 8 |

| November 30 | | | | | December 31 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| M | W | Ep | H. | S ☉ R | 1 | f | 13 | 15 | ☉ 20 ♑ |
| 1 | d | 19 | | All Sts | 2 | g | * | | 3 50 9 |
| 2 | e | 18 | 2 | Al Soul | 3 | a | 17 | 11 | 3 49 9 |
| 3 | f | * | | Craft. A | 4 | b | 15 | 23 | 3 48 9 |
| 4 | g | 17 | 0 | Except | 5 | c | 14 | 20 | 3 48 9 |
| 5 | a | 15 | 11 | Pow. t. | 6 | d | 13 | | 3 48 9 |
| 6 | b | 14 | 7 | Appear | 7 | e | 12 | 8 | 3 47 9 |
| 7 | c | 12 | 19 | 4 16 8 | 8 | f | 11 | 21 | dayes |
| 8 | d | * | | ☉ 25 ♏ | 9 | g | 10 | | are at a |
| 9 | e | 11 | 8 | 4 15 8 | 10 | a | 9 | 17 | ſtand |
| 10 | f | 9 | | 4 13 8 | 11 | b | 8 | | ☉ in ♑ |
| 11 | g | 8 | 4 | Martin | 12 | c | 7 | 6 | dayes |
| 12 | a | 7 | 17 | Cra. M. | 13 | d | * | | encreaſ. |
| 13 | b | * | | Except. | 14 | e | 6 | 2 | 3 47 9 |
| 14 | c | 6 | 13 | Ret. bre. | 15 | f | 4 | 15 | 3 47 9 |
| 15 | d | 5 | | Appear | 16 | g | * | | 3 48 9 |
| 16 | e | 4 | 2 | ☉ 49 ♐ | 17 | a | 3 | 3 | 3 48 9 |
| 17 | f | 3 | 14 | 4 3 8 | 18 | b | 2 | | 3 49 9 |
| 18 | g | 2 | | Oct. M. | 19 | c | 1 | 0 | 3 49 9 |
| 19 | a | 1 | 11 | Except. | 20 | d | 29 | 12 | ☉ 09 ♑ |
| 20 | b | 29 | 23 | Ret. bre. | 21 | e | 28 | 8 | Tho. |
| 21 | c | 28 | 20 | Appear | 22 | f | 27 | | 3 50 9 |
| 22 | d | 27 | | ☉ 10 ♐ | 23 | g | 26 | 0 | 3 51 9 |
| 23 | e | 26 | 8 | 3 56 9 | 24 | a | 25 | 17 | 3 52 9 |
| 24 | f | * | | 3 55 9 | 25 | b | 24 | | Th. ſ. |
| 25 | g | 25 | 4 | Qu. Ma | 26 | c | 23 | 6 | Step. |
| 26 | a | 23 | 17 | Except. | 27 | d | 22 | 18 | John |
| 27 | b | * | | Ret bre. | 28 | e | 21 | | Inno. |
| 28 | c | 22 | 6 | T. end | 29 | f | 20 | 15 | 3 56 9 |
| 9 | | 21 | | 3 51 9 | 30 | g | 19 | | 3 57 9 |
| 30 | | 20 | 2 | Andr. | 31 | a | 18 | 3 | 3 58 9 |

## *The Description and use of this constant Kalender.*

EAch Month hath four Columns. The first whereof shews the dayes of the Moneth. The second Column having the Dominical Letters, shews the dayes of the Week. The third Columne having two rows of Figures, the first of them shews the Epact of the Moon to finde out the day of the change, and the Age of the Moon, and the other the hour of the day, reckoning the said hours alwayes from Noon. The fourth Column shews the chief dayes of the Year, and the Terms and their Returns which are fixed and certain. And in the void places it shews the rising and setting of the Sun at *London*, and the place of the Sun every tenth day or degree. These four Columns are of themselves sufficient for mens ordinary use, and may with a little wit and pains be made to perform all the conclusions which the yearly Almanacks shew and teach. As you shall see by these brief Rules and Observations.

### 1. *To know the day of the Month.*

This is the chief and most useful obser-

| November 30 | | | | | | December 31 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M | W | Ep | H. | S | ☉ R | 1 | f | 18 | 15 | ☉ 20 ♐ |
| 1 | d | 19 | | All Sts | | 2 | g | ✱ | | 3 | 50 | 9 |
| 2 | e | 18 | 2 | Al Soul | | 3 | a | 17 | 11 | 3 | 49 | 9 |
| 3 | f | ✱ | | Craft. A | | 4 | b | 15 | 23 | 3 | 48 | 9 |
| 4 | g | 17 | 0 | Except | | 5 | c | 14 | 20 | 3 | 48 | 9 |
| 5 | a | 15 | 11 | Pow.r. | | 6 | d | 13 | | 3 | 48 | 9 |
| 6 | b | 14 | 7 | Appear | | 7 | e | 12 | 8 | 3 | 47 | 9 |
| 7 | c | 12 | 19 | 4 | 16 8 | 8 | f | 11 | 21 | dayes | | |
| 8 | d | ✱ | | ☉ 25 ♏ | | 9 | g | 10 | | are at a | | |
| 9 | e | 11 | 8 | 4 | 15 8 | 10 | a | 9 | 17 | ſtand | | |
| 10 | f | 9 | | 4 | 13 8 | 11 | b | 8 | | ☉ in ♑ | | |
| 11 | g | 8 | 4 | Martin | | 12 | c | 7 | 6 | dayes | | |
| 12 | a | 7 | 17 | Cra. M. | | 13 | d | ✱ | | encreaſ. | | |
| 13 | b | ✱ | | Except. | | 14 | e | 6 | 2 | 3 | 47 | 9 |
| 14 | c | 6 | 13 | Ret.bre. | | 15 | f | 4 | 15 | 3 | 47 | 9 |
| 15 | d | 5 | | Appear | | 16 | g | ✱ | | 3 | 48 | 9 |
| 16 | e | 4 | 2 | ☉ 49 ♐ | | 17 | a | 3 | 3 | 3 | 48 | 9 |
| 17 | f | 3 | 14 | 4 | 3 8 | 18 | b | 2 | | 3 | 49 | 9 |
| 18 | g | 2 | | Oct.M. | | 19 | c | 1 | 0 | 3 | 49 | 9 |
| 19 | a | 1 | 11 | Except. | | 20 | d | 29 | 12 | ☉ 09 ♑ | | |
| 20 | b | 29 | 23 | Ret.bre. | | 21 | e | 28 | 8 | Tho. | | 9 |
| 21 | c | 28 | 20 | Appear | | 22 | f | 27 | | 3 | 50 | 9 |
| 22 | d | 27 | | ☉ 10 ♐ | | 23 | g | 26 | 0 | 3 | 51 | 9 |
| 23 | e | 26 | 8 | 3 | 56 9 | 24 | a | 25 | 17 | 3 | 52 | 9 |
| 24 | f | ✱ | | 3 | 55 9 | 25 | b | 24 | | Th. ſ. | | |
| 25 | g | 25 | 4 | Qu. Ma | | 26 | c | 23 | 6 | Step. | | |
| 26 | a | 23 | 17 | Except. | | 27 | d | 22 | 18 | John | | |
| 27 | b | ✱ | | Ret bre. | | 28 | e | 21 | | Inno. | | |
| 28 | c | 22 | 6 | T. end | | 29 | f | 20 | 15 | 3 | 56 | 9 |
| 9 | | 21 | | 3 | 51 9 | 30 | g | 19 | | 3 | 57 | 9 |
| 30 | | 20 | 2 | And. | | 31 | a | 18 | 3 | 3 | 58 | 9 |

## *The Description and use of this constant Kalender.*

EAch Month hath four Columns. The first whereof shews the dayes of the Moneth. The second Column having the Dominical Letters, shews the dayes of the Week. The third Columne having two rows of Figures, the first of them shews the Epact of the Moon to finde out the day of the change, and the Age of the Moon, and the other the hour of the day, reckoning the said hours alwayes from Noon. The fourth Column shews the chief dayes of the Year, and the Terms and their Returns which are fixed and certain. And in the void places it shews the rising and setting of the Sun at *London*, and the place of the Sun every tenth day or degree. These four Columns are of themselves sufficient for mens ordinary use, and may with a little art and pains be made to perform all the conclusions which the yearly Almanacks shew and teach. As you shall see by these brief Rules and Observations.

### 1. *To know the day of the Month.*

This is the chief and most useful obser-

vation of any Almanack, and may as well be perform'd by this as by any other. To this purpose you must first by the general Kal. at the beginning hereof know the Dominical or Sunday Letter for the year; then considering with your self whether it be the beg inning, midst, or end of the Moneth (as you must do in any Almanack) finde this letter in the beginning, or midst, or end of the Moneth, and reckoning from it to the day of the week, either Munday, Tuesday, or whatsoever other day it is, right against the day of the Week, you shall finde what day of the Moneth it is.

Here is no difficulty in this, only when it is Leap year, and then you see there are two Sunday Letters, the first of these you must use only to the 24. of *Feb.* and the other all the year after.

Thus this present year 1656 the Dominical Letters being *F* and *E*; the first Sunday in *January* is at the first *F*, which is at the 6 day of the Month. The first Sunday in *Febr.* is at the first *F*, which is the third day of the Moneth. But the first Sunday in *March*, is at the first *E*, which is the second day of the Moneth. And so all the year after.

*To know what day of the Week any notable Day will fall upon, in any Year.*

First, finde the Dominical Letter in the former Table, then finde this Letter in your Moneth, next before the day you desire, and so from thence count the dayes of the Week, till you come to the day desired.

Thus, if you would know what day of the week *Lady Day*, or the *Annunciation* of the *Lady Mary* falls upon this year, 1656. The Dominical Letter is *E*, this is two dayes before the said day, therefore that falls upon a Tuesday,

But now in the year 1659, when the Dominical Letter is *B*, *Lady Day* will be upon the Friday. This will be in a short time as ready to you, as if these Letters were painted out for you in Vermilion.

*To finde the time of the Suns Rising and Setting.*

This is set down for most of the Dayes in the whole year for *London*, and may serve for all the East, South, and West parts of *England*. And this I have done after somewhat a briefer manner than is usual, making the minutes which are placed in the midst, to serve both the hours of setting

and rising, which you must understand thus, The 22 of *January* you shall finde these figures, 4, 30, 8. That is the Sun that day sets at 4, 30, or half an hour past four of the clock, and riseth at 30.8. or half an hour before 8 of the clock. And so you must account them alwayes, remembring that as the minutes follow the first figure, so they must be reckoned after it in time, and as they stand before the last figure, so they are to be reckoned before it in time.

And here think it not preposterous, that I have set down the time of Sun-setting before the Rising, for the Sun-setting is of most use (as you shall see anon) and the other serves in a manner but for the handsomer filling up of the Column.

| | h. | m. |
|---|---|---|
| *If you double this time of Sun-setting* | 4 | 30 |
| *You have the length of the day* | 9 | 0 |
| *If you substract it from* | 12 | 0 |
| *You have the time of Suns Rising, differing in shew from the Kalender but all one in effect, and this doubled shews the length of the night.* | 7 | 30 |
| | 15 | 0 |

### 4. *To finde the place of the Sun.*

This is set down in the Kalender about every tenth day, to every tenth degree, so that

that reckoning a degree for each day between, you shall have the place of the Sun exact enough for most ordinary uses.

Thus the tenth of *March*, the Sun enters into *Aries*, and therefore the 15 day or five dayes after, the Sun is in five degrees of *Aries*.

5. *To finde the day and hour of the Change or New Moon, and thereby the Full and Quarters.*

First, you must finde the Moons *Epact* for the present Year you are in. This *Epact* number is found out by the Golden Number, I shall not now shew how, but only have set it down in the General Table, at the beginning of the Kalender. And though this might be found out by the *Golden Number*, yet that would stand so scattering and without form, that it is much handsomer and readier to finde out by this *Epact*, which runs for the most part in a constant order, only here and there skipping a day or a number, which is marked with this ✱.

Having found out the Epact for the present year, turn to the Month you desire, and there finde out the said Number of the *Epact*, in the third Columne of the Month, and

and mark what day of the moneth it ſtands againſt, for that is the day of the Change, or New Moon: likewiſe if you have reſpect to the Dominical Letter which is by it, you ſhall ſee what day of the week it is.

Now here in this Column there are two rowes of figures, the firſt ſhews the *Epact* Number, and the next the time of the day, reckoned by the hours from noon, which are plain to underſtand till you come to 12 hours after noon, which is midnight: but then the numbers above 12 you muſt reckon to the morning of the next day.

So that theſe hours afternoon

13 14 15 16 17 18 19 20 21 22 23 24

1 2 3 4 5 6 7 8 9 10 11 12.

Are all one with theſe the next day in the morning.

Thus in the year 1657. the *Epact* being 25, and the Dominical Letter *D*, you ſhall find this *Epact* number 25 againſt the 4th. of *January*, being Sunday, and the figure of 8 ſtanding by it, ſhews that it is about 8 hours after noon, and this is the time of the New Moon.

Again, you ſhall finde this Epact number 25 againſt the 3d. of *February*, being Tueſday, and the (o) ſtanding by it ſhews it is juſt noon.

Again,

Again, you shall finde this number 25 against the 4th of *March*, at 10 hours afternoon. And also against the 2d. of *April* at 22 hours afternoon, that is, at 10 of the clock the next day in the forenoon. And so for the rest of the Moneths, or for any other *Epact* any other year.

Now this is the true time of the New Moon, according to the Moons mean motion, which though it may differ half a day from the true change, yet it seldom differs so much, and is better for the following conclusions than the true time.

Having thus found the time of the New Moon, you may from thence reckon the age of the Moon, and so finde the quarters or full Moon.

| *Thus the Moons age is* | *dayes,* | *hou.* | *min.* |
|---|---|---|---|
| *At the first quarter* | 7 | 9 | 11 |
| *At the full Moon* | 14 | 18 | 22 |
| *At the last quarter* | 22 | 3 | 33 |
| *At whole Moon* | 29 | 12 | 44 |

Or else observe the Dominical Letter that is against the *Epact* or day of the New Moon, and where you finde that Letter again, that is the first quarter. For the full Moon take two weeks and one day, which will fall upon the letter next to it. For the last quarter take one week more, which will fall

fall upon the letter of the full Moon. Thus if the New Moon fall on A, the first quarter falls on the next A. The full Moon a week after on the next *B*. And the last quarter on the next *B*.

And thus you have this brief Kalender or constant Almanack for many years; only for the more exactness in the hour of the Moons change and Age, I restrain it to 19 years. For though the change of the Moon (for the most part) happens again upon the same dayes for several revolutions of the Prime, or Golden Number xix: yet not upon the same hour of the day but alters every revolution 7 hours, 27 minutes, 30 seconds, proceeding forward for the most part: but the Leap years coming in with a day more than ordinary, keeps this motion so much backward, that in 300 years it neither gains nor loseth a day, only differs in the hour of the day, Yet for the more exactness it will be better to renue this every xix years.

All these things this brief Kalender plainly shews you, with little or no trouble more than in a yearly Almanack. I shall now proceed to some other conclusions which depend upon these, but are not so plainly expressed in the Kalender; and therefore require a little more pains and consideration.

6. To

## To finde the time of the Moons Southing, and the time of the Tydes any day.

| Moons Age D. D. | Moon South. H. M. | Tide London H. M. |
|---|---|---|
| ☌ ☍ | 12 0 | 3 0 |
| 1 16 | 12 48 | 3 48 |
| 2 17 | 1 36 | 4 36 |
| 3 18 | 2 24 | 5 24 |
| 4 19 | 3 12 | 6 12 |
| 5 20 | 4 0 | 7 0 |
| 6 21 | 4 48 | 7 48 |
| 7 22 | 5 36 | 8 36 |
| 8 23 | 6 24 | 9 24 |
| 9 24 | 7 12 | 10 12 |
| 10 25 | 8 0 | 11 0 |
| 11 26 | 8 48 | 11 48 |
| 12 27 | 9 36 | 12 36 |
| 13 28 | 10 24 | 1 24 |
| 14 29 | 11 12 | 2 12 |

Having the Age of the Moon by the former rule, finde the said age in this table, and in that line you have the Moons coming to the South.

Thus the Moon being either 5 dayes or 20 dayes old, the Moon is South at 4 of the clock.

Now upon this depends the time of the Tydes, as you may partly see by this Table, for when it is New or Full Moon, it is observed that it is high Tyde at *London*, at 3 of the clock: and so for any other day adde three hours to the time of the Moons Southing, and you have the time of high Tides at *London*.

The like you may do for any other place, which you may write down in a Table, (if you have occasion for one place very much)

or

or else, only adde the time set to these places, to the time of the Moons coming to the South, and so you have the time of high tide in any of these places, only take notice that the Neap Tides, which are about the quarters of the Moon will fall an hour or more sooner.

*A Tide Table.*

| | h. m. |
|---|---|
| *Quinborow, Southam. Portsmouth, S.* | 0 0 |
| *Rochester, Malden, Blacktail, S. by W.* | 0 45 |
| *Gravesend, Downs, Blackness, Scilly, S S W.* | 1 30 |
| *Dundee, S. Andrews, Lisbon, Lucas, S W by S.* | 2 15 |
| *London, Tinmouth, Amsterdam, Rotterdam, S W.* | 3 0 |
| *Barwick, Flushing, Flamborough, S W by W.* | 3 45 |
| *Baltamoor, Cork, Severn, Calice, W S W.* | 4 30 |
| *Falmouth, Humber, Newcastle, W by S.* | 5 15 |
| *Plimouth, Hull, Lin, S. Davids, W & E.* | 6 0 |
| *Bristol, Start-point, Waterford, E by S.* | 6 45 |
| *Milford, Bridgwater, Landsend, E S E* | 7 30 |
| *Portland, Hartflew, Dublin, S E by E.* | 8 15 |
| *Pool, Man-Isles, Dunbar, Dicp, S E.* | 9 0 |
| *Needles, Orford, South and North forlands, S E by S.* | 9 45 |
| *Yarmouth, Dover, Harwich, S S E.* | 10 30 |
| *Rie, Winchelsey, Culshot, S by E.* | 11 15 |

## 7. *To finde the time of the night, by the Moon shining upon a Sun-Dial.*

Having the age of the Moon, and so the ne of the Moons coming to the South by former Table, adde about a quarter or lf an hour thereunto, as it is more early late in the night, and adde this Southing the Moon, and the shadow of the Moon on the Dial together, and that is the e of the Night. If the summe exceed 12 rs, take only the over-plus.

Thus the Moon being about 9 days old at on, will be 9 dayes and an half at Night, d so is south about 7 h. 30 m.

Now suppose the shadow to be upon the al at 3 0

These two added together, shews the time the Night 10 30

## 8. *To finde what Sign the Moon is in.*

Astronomers divide the Compass of the avens into 12 Signes, which they set th by these names and characters, which must be a little acquainted with.

*Aries*

*Aries, Taurus, Gemini, Cancer, Leo, Virgo*

♈ 1 ♉ 2 ♊ 3 ♋ 4 ♌ 5 ♍ 6

*Libra, Scorpio, Sagittar. Capric. Aquar. Pisces.*

♎ 7 ♏ 8 ♐ 9 ♑ 10 ♒ 11 ♓ 12

The Sun runs through these 12 Signes, but once in a year, the Moon in less than a month, *viz.* in 27 dayes, 7 hours, 43 min.

Age
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

A

| Age | S. | D. | M. |
|---|---|---|---|
| 1 | 0 | 13 | 11 |
| 2 | 0 | 26 | 21 |
| 3 | 1 | 9 | 32 |
| 4 | 1 | 22 | 42 |
| 5 | 2 | 5 | 53 |
| 6 | 2 | 19 | 4 |
| 7 | 3 | 2 | 14 |
| 8 | 3 | 15 | 26 |
| 9 | 3 | 28 | 35 |
| 10 | 4 | 11 | 46 |
| 11 | 4 | 24 | 56 |
| 12 | 5 | 8 | 7 |
| 13 | 5 | 21 | 18 |
| 14 | 6 | 4 | 28 |
| 15 | 6 | 17 | 39 |
| 16 | 7 | 0 | 49 |
| 17 | 7 | 14 | 0 |
| 18 | 7 | 27 | 11 |
| 19 | 8 | 10 | 21 |
| 20 | 8 | 23 | 32 |
| 21 | 9 | 6 | 42 |
| 22 | 9 | 19 | 53 |
| 23 | 10 | 3 | 3 |
| 24 | 10 | 16 | 14 |
| 25 | 10 | 29 | 25 |
| 26 | 11 | 12 | 35 |
| 27 | 11 | 25 | 46 |
| 28 | 12 | 8 | 56 |
| 29 | 12 | 22 | 7 |
| 30 | 13 | 5 | 17 |

Now every New Moon, the Sun and Moon are both in one Signe and Degree, but the Moon hath a motion of about 13 Degrees every day, as is shewed in this Table; therefore according to the age of the Moon, adde the Signes and Degrees of the Moons motion, to the place of the Sun at the New Moon, and so you shall have the Sign and Degree which the Moon is in at any time desired.

Thus in the year 1656, it being New Moon the 14 of *April*, the Sun and Moon are then both in five Degrees of *Taurus*, now upon the 24 of *April*, the Moon being 10 dayes old, I would know what Signe the Moon is in.

This

This Table shews that for the 10 dayes motion, you must adde 4s. 12d. to the said 5 deg. of ♉.

Now counting these 4 signes upon your fingers, reckoning the names of the Signes in order from *Taurus*, ♊ 1, ♋ 2, ♌ 3, ♍ 4. it falls upon the Signe *Virgo*. Lastly, adding the odde 5 deg. of the Suns place, and the 12 degree of the Moons motion together, it shews the place of the *Moon* to be in 17 degrees of Virgo.

Some make much use of the *Moons* being in such and such Signes, both in Physick and Husbandry, of which I shall say nothing, but only give you one conclusion which must depend hereon, and that is,

### 9. *To know the time of the Moon rising and setting.*

Some reckon the Southing of the ☽ after the Sun, to be equal with the setting of the new *Moon* after the Sun-set, and with the rising of the full *Moon* after the Sun-set. But this is seldom true, for many times the *Moon* riseth 4 or 5 nights within an hours time.

Therefore to know this, having found the place of the *Moon*, or what Signe the *Moon* is in, seek out in the Kalender at what

ut time the Sun is in this Signe and De-
e? and there you shall finde the true
e of Sun-setting being in that place. This
half the continuance of the Sun or *Moon*
ve the Horizon in that Signe and De-
e, this added to the time of the *Moons*
ing to the south, shews the time of her
ing, and substracted from it, shews the
e of her rising.

Thus upon the 24 of *April* the *Moon* be-
10 dayes old, and in the 17 deg. of Vir-
, it is desired to know the time of the
ons rising and setting.

| | h. | m. |
|---|---|---|
| *st, the Moon being* 10 *dayes old is South about* | 08 | 00 |
| *ndly, the Sun is in this signe and degree about the* 30 *of* August, *and then sets at* | 6 | 27 |
| *substracted, shews the rising the afternoon.* | 1 | 33 |
| *added, shews the time of setting* | 14 | 17 |
| *ich casting* 12 *away, is morning* | 2 | 27 |

In all of these Questions there ought to some allowance, for the time after on; but the *Moons* motion being not al-yes equal, this allowance may sometimes ke the work better, sometimes worse; refore I shall not trouble you therewith count this sufficient for this standing and neral Kalender.

A

## A Table of Interest at 8 per Cent.

| | | 1 Monthe | | | | 2 Monthes | | | | 3 Monthes | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | li. | sh. | d. | c. | li. | sh. | d. | c. | li. | sh. | d. | c. |
| Shill. | 5 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 80 | 0 | 0 | 1 | 20 |
| | 10 | 0 | 0 | 0 | 80 | 0 | 0 | 1 | 60 | 0 | 0 | 2 | 40 |
| | 15 | 0 | 0 | 1 | 20 | 0 | 0 | 2 | 40 | 0 | 0 | 3 | 60 |
| Pounds | 1 | 0 | 0 | 1 | 60 | 0 | 0 | 3 | 20 | 0 | 0 | 4 | 80 |
| | 2 | 0 | 0 | 3 | 20 | 0 | 0 | 6 | 40 | 0 | 0 | 9 | 60 |
| | 3 | 0 | 0 | 4 | 80 | 0 | 0 | 9 | 60 | 0 | 1 | 3 | 40 |
| | 4 | 0 | 0 | 6 | 40 | 0 | 1 | 0 | 80 | 0 | 1 | 7 | 20 |
| | 5 | 0 | 0 | 8 | 00 | 0 | 1 | 4 | 0 | 0 | 2 | 0 | 00 |
| | 6 | 0 | 0 | 9 | 60 | 0 | 1 | 7 | 20 | 0 | 2 | 4 | 80 |
| | 7 | 0 | 0 | 11 | 20 | 0 | 1 | 10 | 40 | 0 | 2 | 9 | 60 |
| | 8 | 0 | 1 | 0 | 80 | 0 | 2 | 1 | 60 | 0 | 3 | 2 | 40 |
| | 9 | 0 | 1 | 2 | 40 | 0 | 2 | 4 | 80 | 0 | 3 | 7 | 20 |
| Pounds. | 10 | 0 | 1 | 4 | 0 | 0 | 2 | 8 | 0 | 0 | 4 | 0 | 0 |
| | 20 | 0 | 2 | 8 | 0 | 0 | 5 | 4 | 0 | 0 | 8 | 0 | 0 |
| | 30 | 0 | 4 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 12 | 0 | 0 |
| | 40 | 0 | 5 | 4 | 0 | 0 | 10 | 8 | 0 | 0 | 16 | 0 | 0 |
| | 50 | 0 | 6 | 8 | 0 | 0 | 13 | 4 | 0 | 1 | 0 | 0 | 0 |
| | 60 | 0 | 8 | 0 | 0 | 0 | 16 | 0 | 0 | 1 | 4 | 0 | 0 |
| | 70 | 0 | 9 | 4 | 0 | 0 | 18 | 8 | 0 | 1 | 8 | 0 | 0 |
| | 80 | 0 | 10 | 8 | 0 | 0 | 1 | 4 | 0 | 1 | 12 | 0 | 0 |
| | 90 | 0 | 12 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 16 | 0 | 0 |
| Pounds. | 100 | 0 | 13 | 4 | 0 | 1 | 6 | 8 | 0 | 2 | 0 | 0 | 0 |
| | 200 | 1 | 6 | 8 | 0 | 2 | 13 | 4 | 0 | 4 | 0 | 0 | 0 |
| | 300 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 6 | 0 | 0 | 0 |
| | 400 | 2 | 13 | 4 | 0 | 5 | 6 | 8 | 0 | 8 | 0 | 0 | 0 |
| | 500 | 3 | 6 | 8 | 0 | 6 | 13 | 4 | 0 | 10 | 0 | 0 | 0 |
| | 600 | 4 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 12 | 0 | 0 | 0 |
| | 700 | 4 | 13 | 4 | 0 | 9 | 6 | 8 | 0 | 14 | 0 | 0 | 0 |
| | 800 | 5 | 6 | 8 | 0 | 10 | 13 | 4 | 0 | 16 | 0 | 0 | 0 |
| | 900 | 6 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 18 | 0 | 0 | 0 |
| | 1000 | 6 | 13 | 4 | 0 | 13 | 6 | 8 | 0 | 20 | 0 | 0 | 0 |

| | 6 Monthes | | | | 9 Monthes | | | | 12 Monthes | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | li. | sh. | d. | c. | li. | sh. | d. | c. | li. | sh. | d. | c. |
| 5 | 0 | 0 | 2 | 40 | 0 | 0 | 3 | 60 | 0 | 0 | 4 | 80 |
| 10 | 0 | 0 | 4 | 80 | 0 | 0 | 7 | 20 | 0 | 0 | 9 | 60 |
| 15 | 0 | 0 | 7 | 20 | 0 | 0 | 10 | 80 | 0 | 1 | 2 | 40 |
| 1 | 0 | 0 | 9 | 60 | 0 | 1 | 2 | 40 | 0 | 1 | 7 | 20 |
| 2 | 0 | 1 | 7 | 20 | 0 | 2 | 4 | 80 | 0 | 3 | 2 | 40 |
| 3 | 0 | 2 | 4 | 80 | 0 | 3 | 7 | 2 | 0 | 4 | 9 | 60 |
| 4 | 0 | 3 | 2 | 40 | 0 | 4 | 9 | 60 | 0 | 6 | 4 | 80 |
| 5 | 0 | 4 | 0 | 00 | 0 | 6 | 0 | 00 | 0 | 8 | 0 | 00 |
| 6 | 0 | 4 | 9 | 60 | 0 | 7 | 2 | 40 | 0 | 9 | 7 | 20 |
| 7 | 0 | 5 | 7 | 20 | 0 | 8 | 4 | 80 | 0 | 11 | 2 | 40 |
| 8 | 0 | 6 | 4 | 80 | 0 | 9 | 7 | 20 | 0 | 12 | 9 | 60 |
| 9 | 0 | 7 | 2 | 40 | 0 | 10 | 9 | 60 | 0 | 14 | 4 | 80 |
| 10 | 0 | 8 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 16 | 0 | 0 |
| 20 | 0 | 16 | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 12 | 0 | 0 |
| 30 | 1 | 4 | 0 | 0 | 1 | 16 | 0 | 0 | 2 | 8 | 0 | 0 |
| 40 | 1 | 12 | 0 | 0 | 2 | 8 | 0 | 0 | 3 | 4 | 0 | 0 |
| 50 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 4 | 00 | 0 | 0 |
| 60 | 2 | 8 | 0 | 0 | 3 | 12 | 0 | 0 | 4 | 16 | 0 | 0 |
| 70 | 2 | 16 | 0 | 0 | 4 | 4 | 0 | 0 | 5 | 12 | 0 | 0 |
| 80 | 3 | 4 | 0 | 0 | 4 | 16 | 0 | 0 | 6 | 8 | 0 | 0 |
| 90 | 3 | 12 | 0 | 0 | 5 | 8 | 0 | 0 | 7 | 4 | 0 | 0 |
| 100 | 4 | 0 | 0 | 0 | 6 | | 0 | 0 | 8 | 0 | 0 | 0 |
| 200 | 8 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 16 | 0 | 0 | 0 |
| 300 | 12 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 24 | 0 | 0 | 0 |
| 400 | 16 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 32 | 0 | 0 | 0 |
| 500 | 20 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 40 | 0 | 0 | 0 |
| 600 | 24 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 48 | 0 | 0 | 0 |
| 700 | 28 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 56 | 0 | 0 | 0 |
| 800 | 32 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 64 | 0 | 0 | 0 |
| 900 | 36 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 72 | 0 | 0 | 0 |
| 1000 | 40 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 80 | 0 | 0 | 0 |

## A Catalogue of all the Shires, Cities, and Bishopricks, Market-Towns, Parishes & Parks, in England & Wales.

| Shires | Cities and Bishopricks | Market Towns | Parishes | Parks |
|---|---|---|---|---|
| 1 Barkshire | | 12 | 140 | 013 |
| 2 Bedfordsh. | | 10 | 116 | 012 |
| 3 Buckingh. | | 11 | 185 | 015 |
| 4 Cambridg | Ely | 8 | 163 | 009 |
| 5 Cheshire | Chester | 13 | 68 | 018 |
| 6 Cornwal | | 22 | 161 | 005 |
| 7 Cumberl. | Carlisle | 9 | 58 | 008 |
| 8 Darbishire | | 8 | 106 | 034 |
| 9 Devonsh. | Exeter | 37 | 394 | 023 |
| 10 Dorcetsh. | | 18 | 248 | 012 |
| 11 Durham | Durham | 6 | 118 | 021 |
| 12 Essex | | 21 | 415 | 046 |
| 13 Glocester. | Glocester | 20 | 280 | 019 |
| 14 Hampshire | Winchest | 21 | 289 | 022 |
| 15 Hartfordsh | | 18 | 120 | 022 |
| 16 Herefordsh | Hereford | 8 | 176 | 008 |
| 17 Huntingto. | | 6 | 79 | 007 |
| 18 Kent | Canterbury Rochester | 17 | 389 | 023 |
| 19 Lancashire | | 15 | 36 | 030 |
| 20 Leicestersh. | | 12 | 200 | 013 |
| 21 Lincolnsh. | Lincoln | 26 | 630 | 013 |
| 22 Middlesex | London Westminster | 4 | 186 | 004 |
| 23 Northampt | Peterbor. | 10 | 326 | 023 |
| 24 Nottingh. | | 8 | 168 | 018 |
| 25 Northumb. | | 11 | 168 | 008 |

| | Shires | Cities and Bishopricks | Market Towns | Parishes | Parks |
|---|---|---|---|---|---|
| 26 | Norfolk | Norwich | 26 | 606 | 000 |
| 27 | Oxford | Oxford | 10 | 280 | 009 |
| 28 | Rutland | | 2 | 48 | 004 |
| 29 | Shropshire | | 14 | 170 | 027 |
| 30 | Somerset. | Bath, Wells, Briſtol | 33 | 385 | 018 |
| 31 | Stafford | Lichfield Coventry. | 13 | 130 | 038 |
| 32 | Suffolk | | 28 | 575 | 027 |
| 33 | Surry | | 9 | 140 | 017 |
| 34 | Suſſex | Chicheſt. | 18 | 312 | 033 |
| 35 | Warwikſh. | | 15 | 158 | 016 |
| 36 | Weſtmerl. | | 4 | 26 | 019 |
| 37 | Wiltſhire | Salisbury | 19 | 304 | 029 |
| 38 | Worceſter | Worceſt. | 10 | 152 | 016 |
| 39 | Yorkſhire | York | 46 | 563 | 072 |
| 40 | Angleſey | | 2 | 74 | 000 |
| 41 | Brecknock | | 3 | 61 | 002 |
| 42 | Cardigan | | 4 | 64 | 000 |
| 43 | Carmarth | | 6 | 87 | 002 |
| 44 | Carnarv. | | 5 | 68 | 000 |
| 45 | Denbyth. | | 3 | 57 | 006 |
| 46 | Flintſhire | Bangor | 1 | 28 | 002 |
| 47 | Glamorg | | 7 | 118 | 005 |
| 48 | Montgom | St. Aſaph | 6 | 47 | 000 |
| 49 | Monmout | | 6 | 127 | 008 |
| 50 | Merioneth. | | 3 | 27 | 000 |
| 51 | Pembrook | S. Davids | 6 | 145 | 003 |
| 52 | Radnorſh. | | 4 | 52 | 000 |
| | Shires 52 | 25,26 | 654 | 9725 | 1781 |

## *Of the Reduction of Weights of several Places.*

| *One pound Avoir-du-poiz weight at* Lon. *makes at these several places.* | | *One pound weight in any of these places, makes at* Lo. *of Avoir-du-* |
|---|---|---|
| *li. parts.* | | *li. parts.* |
| 0,9615 | Antwerp | 1,04 |
| 0,9 | Amsterdam | 1,1111 |
| 0,91 | Abbeville | 1,0989 |
| 1,282 | Ancona | 0,78 |
| 1,12 | Avignon | 0,8928 |
| 0,91 | Burdeaux | 1,0989 |
| 0,91 | Burgoine | 1,0989 |
| 1,25 | Bollenio | 0,8 |
| 0,98 | Bridges | 1,02 |
| 1,3698 | Callabria | 0,73 |
| 1,07 | Callais | 0,9345 |
| 0,8474 | Constantinople | 1,1816 |
| 0,91 | Diep | 1,0989 |
| 1,16 | Dantzick | 0,862 |
| 1,3333 | Ferrara | 0,75 |
| 1,288 | Florence | 0,78 |
| 1,06 | Flanders, *all* | 1,9433 |
| 0,9345 | Geneva | 0,07 |
| 1,4084 | Genoa *subtle* | 0,71 |
| 1,4285 | Genoa *Gross* | 0,7 |

| One li. Avoir-du-poiz weight at London makes at these several places. | | One li. at any of these places makes at Lond. of Avoir-du-poiz weight |
|---|---|---|
| li. parts | | li parts. |
| 0,92 | Hamburg | 1,0865 |
| 0,95 | Holland | 1,0526 |
| 0,881 | Lyxborne | 1,135 |
| 1,07 | Lyons common | 0,9345 |
| 0,98 | *Silk weight* | 1,0204 |
| 0,9 | *Customers wt.* | 1,1111 |
| 1,3333 | Leighorn | 0,75 |
| 1,4285 | Millan | 0,7 |
| 1,3333 | Mirandola | 0,75 |
| 0,88 | Norimberg | 1,2363 |
| 1,4084 | Naples | 0,71 |
| 0,89 | Paris | 1,1235 |
| 0,83 | Prague | 1,2048 |
| 1,3888 | Placentia | 0,72 |
| 1,12 | Rochel | 0,8928 |
| 1,27 | Rome | 0,7874 |
| 0,875 | Rovan *vicont* | 1,1428 |
| 0,9017 | *common wt.* | 1,1089 |
| 1,08 | Sivil | 0,9259 |
| 1,12 | Tholousa | 0,8928 |
| 1,2195 | Turen | 0,82 |
| 1,5625 | Venice *subtle* | 0,64 |
| 0,9433 | *gross* | 1,06 |
| 0,813 | Vienna | 1,23 |

A Table for the Reduction of the Measures of several places.

| *One Ell at* Lon. *makes at these several places, Ells, Aulnes, Braces, or, &c.* | | | *One Ell, Auln, Brace &c. at these places, makes at* London. |
|---|---|---|---|
| *l. parts.* | | | *Ells, parts.* |
| 1,6949 | Amsterdam | | 0,59 |
| 1,6666 | Antwerp | | 0,6 |
| 1,64 | Bridges | | 0,6097 |
| 1,65 | Arras | | 0,606 |
| 1,74 | Norimberg | | 0,5747 |
| 2,08 | Colen | | 0,4807 |
| 1,66 | Liſle | *Ells.* | 0,6024 |
| 1,57 | Maſtrich | | 0,6369 |
| 2,0866 | Frankford | | 0,4792 |
| 13,833 | Dantzick | | 0,7228 |
| 1,45 | Vienna | | 0,6896 |
| 0,95 | Paris | | 1,0526 |
| 1,03 | Rovan | *Aulnes.* | 0,9708 |
| 1,0166 | Lyons | | 0,9836 |
| 1,57 | Callais | | 0,6369 |
| 1,8 | Venice, *linnen* | | 0,5555 |
| 1,96 | Lucques, *Silk* | | 0,5102 |
| 2,0 | | *Braces.* | 0,5 |
| 2,4 | Florence | | 0,4901 |
| 2,3 | Millan | | 0,4347 |
| 2,0 | Leghorn | | 0,5 |
| 1,0328 | Madera's | | 0,9681 |

| *One Ell at* London, *makes at any of these places, Ells, Aulns, &c.* | | *One Ell, Auln, Brace, &c. at any of those places, makes at* London. |
|---|---|---|
| *0 parts.* | | *Ells, parts.* |
| 1,135 | Sivil | 0,7407 |
| 1, | Lisbone | 1, |
| 1,3875 | Castile *Vares* | 0,7207 |
| 1,3625 | Andaluzia | 0,7339 |
| 1,3625 | Granado | 0,7339 |
| 4,8083 | Genoa *Palms* | 0,2079 |
| 0,55 | Saragosse | 1,1881 |
| 0,56 | Rome *Canes* | ,7857 |
| 0,7125 | Barselona | ,4035 |
| 1,2125 | Valentia | 0,8247 |

The manner of using these Tables is after this manner, in such questions as these.

If one pound Avoir-du-poiz at *London*, doth make at *Amsterdam* 0 *l.* 9, parts, how much will 112 *l.* at *London*, make at *Amsterdam*. Work by the Rule of three:

1 *li.* 0.9 :: 112 *li.* *facit* 108 *li.* 8. *pts.*

9

---

1008

Again, if one pound at *Antwerp* is 1 *li.* 04 of the Avoir-du-poiz weight at *London*, then how much is 108 *li.* at *Antwerp* of the *London* weight?

1 *li.* 1.04 :: 108 *li.* *facit* 112 *li.* 32 *pts.*

1,04

---

432

108

---

112|32

being a little above our hundred weight.

The like you may do for any other number of pounds, or for any number of Ells, or any other measure, to reduce the one to the other.

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